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# THE INTERNATIONAL JOURNAL OF ACCOUNTING

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The International Journal of Accounting

# Foreign Company Listings in the United States

**Sara Hanks**
*Rogers & Wells LLP*

**Key Words:** Foreign Company Listings, SEC, US-GAAP, Harmonization

EDITOR'S COMMENT: *The following are remarks presented by Ms. Hanks on August 19, 1998, at a plenary session of the American Accounting Association Meeting in New Orleans.*

Good morning. I'm very happy to be here and to discuss with you some issues that are important to me as a practicing lawyer. Steve Albrecht suggested that I talk about how foreign companies get listed in the United States, and the effect of harmonization of accounting standards. So, I thought I'd start with an overview of how a lot of companies come to the US markets, since the way in which they're introduced to the markets has a lot of influence on whether they eventually succeed with a US offering.

In my experience, only the very biggest, blue chip companies come to the US capital markets of their own accord. There are some companies that are sophisticated enough to decide for themselves when it is time to access the US markets and call the investment bankers to make their proposals. They are in the minority. Most companies first decide to do an offering in the United States when a US investment banker convinces them that US investors are desperate to invest in that company's shares or bonds.

Now, it's in the interests of investment bankers to be optimists. If they weren't, deals would never get done. But, since it's also in their nature to insist that all problems can be overcome with the application of enough manpower, it means that lawyers and accountants, especially accountants, are constantly being blamed when the deal doesn't proceed as fast as the bankers would like.

When a deal fails to make it to the markets, there's a huge cost involved to the company. The company has to pay the costs of its own lawyers and accountants, the expenses of the investment bankers, including the lawyers of the investment bankers. There's also the very large, but unquantifiable, cost involved in having a company's senior management dis-

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tracted from their duties for the three to six months it takes to do an offering in the US capital markets.

It would be interesting to know the relationship of the cost of bust deals to companies' overall cost of capital. It can't be insignificant: of the deals that I have worked on, about 50% have failed to come to market in the last year. Now, I practice primarily in the emerging markets and the markets have been pretty volatile of late, but we're talking about fairly large amounts of wasted money here.

Why do these deals fail and what can we do about the cost of capital? To some extent, it's the market, and there's nothing we can do about that. To some extent it's unrealistic expectations: the companies have been led to expect that their shares will fetch a certain price or their bonds will have a lower interest rate, and that's a matter between the investment bankers and their clients. Where we can do something about this cost of capital, though, is in the area of regulation.

SEC regulation has historically been very friendly to foreign companies that wish to raise money in the United States. The SEC has always tried to balance investors' need for information with their desire to invest in the securities of foreign companies. The rules that apply to the disclosure documents that must be prepared for public offerings have always been less stringent for foreign companies. For example, much of the information required to be given with respect to the salaries of officers and directors is not required for foreign companies, who may be from cultures where the disclosure of such information is very sensitive. When I first started to practice in this area over 15 years ago, the concessions made in the area of textual disclosure were very significant. This was because most foreign issuers were coming from countries which had very little in the way of regulation of the offering of securities, and every SEC disclosure requirement meant they had to disclose something that they'd never had to discuss in public before. Now, pretty much every country, including a whole bunch of countries that didn't exist 15 years ago, has its own SEC with its own set of disclosure requirements, frequently based on those of the US SEC. The fact that the US SEC makes concessions with respect to some disclosure requirements is far less relevant where a company's home regulatory agency has its own set of meaningful disclosure requirements.

Except, however, in the case of financial statements. The SEC still requires that a non-US company that wishes to sell its securities to the public in the United States or list its securities on a US stock exchange reconcile its financial statements to US GAAP.

Reconciliation has been required by the SEC since 1967. There are two different approaches that can be taken in trying to accommodate the fact that different jurisdictions have different disclosure requirements. One is for regulators to accept disclosure made in accordance with other jurisdictions' requirements, usually on a mutual basis, which is usually referred to as reciprocity. The other is to work towards the development of standards that are common or at least comparable, frequently referred to as harmonization. The approach that has historically been favored by the SEC has been harmonization. While the SEC does not insist on *uniformity* of accounting practices, it does require *comparability*, and this is what reconciliation is supposed to foster.

Harmonization of accounting practices in the interests of comparability has been a goal of national and international regulators for some time.

There are good reasons for this. Diversity of accounting practices can adversely affect a number of constituencies. Investors seeking to invest on the basis of fundamentals may

wish to compare investment opportunities. Corporate managers may wish to harmonize accounts in order to communicate effectively with the international investment community. Regulators wish to protect investors, create a level playing field and promote the efficiency of the trading system and the stability of the markets. Rating agencies have similar interests to investors (although they may have access to information that investors don't). Each of these different types of users of financial statements may be affected by accounting diversity. The IASC has also stated that the lack of common accounting standards adversely affects the market as a whole. For all of these reasons, the SEC requires reconciliation, although it has made some concessions to this position that I'll discuss in a minute.

This requirement is currently the major sticking point that discourages certain foreign companies from coming to the United States public markets.

It's very expensive to reconcile, it arguably distorts the financial results of a company, and it's generally not necessary in order for the company to access either the private markets in the United States or the public markets elsewhere. For this reason, a lot of companies are choosing not to list or publicly offer their securities in the United States, and for several years the question has been whether the SEC will modify its rules in time to prevent the US markets losing their preeminence.

The question is becoming more pressing with the advent of the Euro and the merger or alliance of various European stock exchanges. Companies now have more options when it comes to capital-raising.

The first option, which I alluded to before, is to do a private placement in the United States. The SEC introduced Rule 144A in 1990 partly with a view to attracting more foreign companies to the US capital markets. Rule 144A says that if a company is selling its securities only to very large, very sophisticated investors who may trade the securities only among themselves, then the offering is not a public offering and it does not have to be registered with the SEC. That means that the SEC's disclosure requirements do not have to be followed and in particular that financial statements do not have to be reconciled. I was at the SEC when this rule was drafted, and it was the expectation of the SEC staff that the type of disclosure that would be included in Rule 144A offering documents was probably the same as what was then used in the Euromarkets: pretty sketchy. The adoption of Rule 144A, though, coincided with the takeoff of the Latin American markets, and so companies that US investors had no knowledge of were coming to the US markets. It was necessary to give more information about these companies and pretty soon it became the industry practice for foreign companies selling their securities in the 144A markets to disclose in the text of their offering documents pretty much the same level of information as they would in a public offering. Note that I say in the text, though. The financial statements for these offerings are not reconciled and do not include any of the supplemental financial information that would be required if the offering were registered with the SEC. I am assisting Carol Ann Frost, who introduced me, and Bill Kinney with a project in which we look at 144A offerings by foreign issuers, evaluate the quality of their accounting disclosure and attempt to determine whether there is a price to be paid in terms of cost of capital for the lack of reconciliation and supplemental financial information. Whatever the results of this research, one thing is clear: large US institutional investors do not require financial statements to be reconciled in order to be comfortable in making their investment decisions.

The other alternative to a public offering in the United States is a public offering or listing in Europe. One of the advantages that used to be offered by a US offering was access to a single very large capital market with depth and liquidity. Events taking place in Europe at the moment mean that the US is about to be challenged on these grounds. With the advent of the Euro, the dollar may no longer be the principal "international" currency, and the various countries of "Euroland" form a single capital market comparable in size to the United States. Moreover, the economies in "Euroland" are becoming more focussed on capital market financing rather than traditional bank financing, and the retail investors there, who are traditionally not given to dabbling in the stock markets, are becoming much more interested in purchasing even speculative securities. There have been several false starts, but at last several European stock exchanges have established workable "second markets" for start-up companies similar to the US NASDAQ market.

The much-publicized link-up between the Frankfurt and London stock exchanges will encourage all these trends. The stock markets in much of Europe permit cross-listing of companies that are listed on other European exchanges. They do not generally impose additional financial disclosure requirements to do so. One of the more stringent exchanges is London, which recognizes the concept of comparabilty of financial statements, but permits reconciliation to UK GAAP, to US GAAP, or to the international principles of IASC.

Thus, Europe offers a single large capital market, single currency, retail investors and access to easy cross-listing and thus more liquidity.

With this state of affairs, it's difficult to see why a company, especially a European company, would want to list or publicly offer its shares in the United States, and it's a state of affairs that has worried US stock exchanges.

This is not say that the SEC hasn't made concessions. It has. The SEC would argue, of course, that permitting reconciling to US GAAP instead of preparing financials in US GAAP is a concession in itself. But there are other significant concessions. Since 1994, for example, the SEC has accepted cash flow statements prepared in accordance with IAS without any reconciliation. And in 1990, the SEC adopted the multijurisdictional disclosure scheme, or MJDS, with Canada. This was a pretty revolutionary move, at least in theory: the premise behind the MJDS is that Canadian disclosure—both textual and financial—provides good enough information on which US retail investors can base their investment decisions. MJDS filings are made on the basis of Canadian disclosure requirements and Canadian GAAP. Unfortunately the SEC got cold feet and added a requirement for reconciliation for certain types of offerings, so the impact of the system was limited. I might also add that the system wasn't quite as revolutionary in practice as you might suppose since the influence of US regulation on Canada is such that some degree of harmonization had already taken place prior to the adoption of the MJDS, so it wasn't a perfect example of reciprocity. It would have been more so if the SEC had succeeded in expanding the system to the UK, which I worked on while I was at the SEC, but nothing ever came of that.

It is unlikely at this point that the SEC would ever consider expanding the MJDS, and thus whether any additional concessions would ever be made depend on the success of IASC in developing a core set of accounting standards that can be used for cross-border securities offerings. The SEC is watching IASC's progress in this regard with much interest. The SEC has stated that in order for it to accept international standards, they will need to produce financial reporting with the same credibility and integrity produced by US standards. The SEC has identified three key elements that are necessary for the IASC's stan-

dards to be accepted. First, the core standards must constitute a comprehensive generally accepted basis of accounting. Secondly, the standards must be of high quality; and thirdly, the standards must be rigorously interpreted and applied. Forgive me if I say, a bit cynically, that these requirements are broad enough that the SEC doesn't need to accept anything it doesn't like.

Unless such further steps are taken, the US capital markets risk becoming marginalized. I don't want to overstate this. After all, we still have the lion's share of the world's capitalization, and probably always will, and there will always be good reasons for some companies to come to the United States: those with operations in the United States, for example. But if foreign companies, especially European companies, are not actively encouraged to come to the United States, they won't. This means US investors will have less access to their securities—they'll have to buy them overseas, if at all, in unfamiliar and perhaps less regulated trading markets.

By insisting on reconciliation, is the SEC in danger of letting the perfect become the enemy of the good?

To answer this question we need to ask a number of preliminary questions:

### How do Investors Make Decisions and What Information do they Need?

One of the SEC's constant themes in this area has been the ability of retail investors to compare different investment opportunities. But retail investors do not make investment decisions on the basis of financial disclosures made in registration statements. In fact, there is a substantial amount of literature discussing the fact that the direct value to retail investors of any disclosure mandated under the securities laws is limited. This being the case, it seems appropriate to ask whether it might not make more sense to focus on the way in which analysts and institutional investors use mandated information, rather than whether retail investors can understand such information, which has been the SEC's traditional approach. This sounds elitist but still is entirely consistent with the SEC's mandate of investor protection. Assuming that retail investors' participation in the securities markets (at least the foreign markets) is principally either through mutual funds and other investment vehicles directed by professional investors or at the recommendation of professional investors, ensuring that such professionals receive sufficient information to make an informed investment decision, in the light of their own experience, access to information and understanding, should be the aim of the SEC. There seems to be a growing movement for security analysts not to cover just the US companies in their industry, but to analyze all the significant companies, regardless of geographical location. The portfolio manager will invest in the best companies, in the most promising industries, taking full account of the particular differences in each country. I'm assuming this trend is going to continue.

Are securities analysts going to be experts in worldwide industries or in countries? We need to ask professional investors what they need in order to make informed decisions, and (since professional investors are likely to request as much information as possible) to what extent we should be subsidizing such investors' research by mandatory disclosure.

There is a cost to requiring additional disclosure, and we need to ask whether it should be borne by corporate issuers, as it is at the moment, or by the people who get paid for analyzing that disclosure.

Professional analysts usually manage to process information in alien formats. One analyst who is a frequent commentator on Japanese earnings ratios, for example, has developed his own system of comparing Japanese price/earnings ratios to those of the United States. He applies US GAAP and the American method of capitalizing earnings to Japanese earnings per share and price/earnings ratios, applying a formula to take account of certain cross-holdings. In many cases analysts have the raw information they need to make the comparisons they want. If we require reconciliation, are we subsidizing professional investors or otherwise requiring non-US companies to do analysts' work for them?

## How are the US Prices of non-US Securities Set?

This matters because of the implication that US retail investors may somehow buy less valuable securities because their information is flawed. Retail investors in an increasingly institutional marketplace do not set the prices of non-US securities. A former chairman of the SEC has made the point that US investors may select a non-US stock over a US stock on the basis of higher earnings per share, only to discover "to their sorrow" (as he says) that it was non-US accounting practices that made the earnings per share look higher. We might ask as to the source of these hypothetical investors' sorrow. If they are sophisticated enough to identify earnings per share information, they could presumably also recognize the relationship that earnings bear to dividend, so they will not be surprised by a lower-than-expected dividend. Nor will they find that the value of their investment is adversely affected by their misunderstanding, because the price of the security is set in the home market.

At present, with the admittedly growing exception of a few transnational companies, prices of securities are set by large investors in the home market, not generally by international—investors, especially retail investors.

Of course, this may change. If the international capital markets become less segmented, such that dominant local investors are no longer the arbiters of the price of securities from their jurisdiction, what information will international investors base their valuation decisions on? Will US institutional investors be influencing the price of non-US stocks on the basis of US GAAP accounts or information from the issuer's home jurisdiction?

## Another Question, We Know the SEC's Answer to is: Is US GAAP the Standard to Which the World Should Aspire?

In other words, we know that US accounting standards are the most detailed in the world. But we need to ask whether the disclosures mandated by US GAAP provide such useful information to investors that first to permit compliance with other standards adversely affects those investors, and second that to require reconciliation to US GAAP does in fact provide useful information.

US GAAP isn't perfect. There is a perception among some non-US companies that US GAAP is an ever-moving target, and some commentators have warned against continually adopting new standards without considering whether the usefulness of new standards offsets the burdens imposed by them.

One issue I mentioned earlier is the fact that few non-US jurisdictions require segment information to the extent required under US GAAP, whereas in the United States we require both geographic and industry segment disclosure. The undeniably useful purpose of segment disclosure is to assist the investor in predicting future earnings, since different industry or geographic segments may have different potential for profit and growth. If a company wishes, however, for whatever reasons, to disguise its revenues in a particular area, segment disclosure that give companies leeway to do so may be of limited use.

While there is some evidence that disaggregated data on an industry basis or on a geographic basis provides useful information to investors, the considerable leeway that companies have in determining geographic segments in particular has led some commentators to observe that standards fall short of user needs.

Even researchers finding that geographic segment information was useful, stated that their findings did not imply that the "garbling of information, intentional or otherwise, is not prevalent." They suggested that the fact that geographical segment disclosure reporting is of significance to users means that improving reporting practice would be worthwhile.

Part of the reason for this is that US GAAP allows companies considerable discretion in defining reportable segments, and companies frequently use coarse, that is, over-broad, definitions. There are a number of reasons why they should wish to do this. With respect to Japanese companies in particular, it has been suggested that companies may wish to disguise "dumping" of goods and transfer pricing issues. Companies may wish to hide bad results in one area by aggregating them with results from an area which had good results.

If it is the case that segment information, however useful it may potentially be, is not currently providing useful information to investors, what purpose is being served by insisting that non-US companies produce reconciled accounts that include segment information? We need to ask whether the burdens imposed on foreign companies are matched by benefits to investors or the markets at large.

We also need to inquire as to which of the other principal differences between US and non-US GAAP produce information that is actually "better" (that is, more useful to investors) than the non-US alternatives.

## Another Question the SEC is Particularly Concerned with is: Will Flexibility Result in a "Race to the Bottom"?

Underlying some of the SEC assertions in this field is the assumption that issuers will disclose only that information which is required to be disclosed. This is not necessarily the case, however. A theory of voluntary disclosure advanced in 1984 suggests that corporate managers have strong incentives to disclose material information and that a mandatory system is thus superfluous. This theory says that managers and shareholders, despite the fact that their interests (as managers and owners of a company) may diverge, have mutual incentives to structure the company so that the market will be confident that all material information is disclosed.

Research with respect to multinational corporations additionally indicates that companies whose securities are listed outside their home markets provide more voluntary disclosure of information than companies that have only domestic listings.

Part of the reason for this may be that markets respond favorably to increases in disclosure.

I am not suggesting here that granting German companies, for example, the ability to list on US exchanges will instantly or even eventually spur those companies to begin disclosing financial information in accordance with US GAAP. Theories and research of this kind, however, do make the point that we should not assume that to adopt a position of flexibility with respect to foreign accounting practices will automatically cause all the disclosures in the regulated market automatically to deteriorate to the lowest common denominator.

Practical experience with respect to Rule 144A that I talked about earlier bears this out. Remember, Rule 144A imposes next to no financial disclosure. Market requirements mean that actual disclosure is fairly extensive .

Additionally, and I hate to bring up issues of litigation, but we should also consider of whether the potential of antifraud liability under US securities laws might provide incentives for issuers to strengthen disclosures made under their home country rules. To the extent that German accounting practices *do* deny investors the basic right to know how a company is doing, there is a good case to be made that failure to disclose movement of funds to or from "hidden reserves" is a failure to disclose a material fact, which can be litigated under Section 10b-5 of the Securities Exchange Act. Companies and their professional advisers thus have adequate incentive to ensure that the treatment of hidden reserves: one of the SEC's frequently-mentioned bugbears, is fully disclosed.

## Do US Investors Want a Level Playing Field?

The SEC frequently asserts that it must avoid disturbing the level playing field upon which US and non-US companies compete on equal terms for capital.

The Commission has, as I mentioned before, exercised a great deal of flexibility in order to attract non-US issuers to the US markets. These accommodations have not generally been the subject of complaint by US issuers.

The SEC should therefore consider whether US companies would be, or would consider themselves to be, at a disadvantage with respect to non-US companies if further accommodations were made. If, as may be the case, the companies do not object to these accommodations, the Commission should investigate as to why this is so, so that the point at which US companies would actually be subject to unfair competition could be determined. US companies may consider that they have an advantage over non-US companies due to name recognition, product availability in the United States, an automatic assumption of higher reliability or any one of a number of factors. US issuers may also be taking account of the fact that in many cases they can export their own financial statements—for example to London—without their needing to make any adjustment or reconciliation themselves.

## How Should Investor Protection and Investor Opportunity be Balanced?

As I discussed earlier, US investors buying many non-US securities are doing so in the US over-the-counter markets or overseas. The SEC, in a 1988 policy statement, cited the need for "efficient structures for quotation, price, and volume information disseminations" and "order execution" as important features in an effective regulatory structure for an inter-

national securities market. All these are available on US Stock Exchanges and NASDAQ, and all are currently being denied to US investors wishing to trade in unlisted foreign stocks. If foreign securities are prevented from being listed on the US stock exchanges, investors have to buy them overseas or over-the-counter.

In 1989 the SEC stated:

> The Commission's challenge is to remove unnecessary impediments to transnational capital formation without unduly disadvantaging US issuers in the US markets, while ensuring that those buying securities in the US capital markets are afforded the protections intended by the Securities Act and the Exchange Act.

Is this still an accurate statement of the Commission's intentions in this area, and if not, should the Commission formulate a new statement of its intentions?

An important factor to bear in mind is that there has been no suggestion that there be any modification with respect to the SEC's requirements that financial statements be independently audited in accordance with US auditing practices. This provides an important investor protection that shouldn't be ignored.

### Does Reconciliation Itself Distort Information?

I have long believed that there is a sort of Heisenberg's principle in effect with respect to financial reporting: that is, that the act of *observance or recording* actually changes the *nature* of the event being recorded. Managers use a number of tools in decision-making, and accounting is one of them.

So if your local accounting principles provide that revenue can be recognized when you send out invoices, you send out invoices according to that schedule. If US GAAP doesn't recognize revenue on the same basis, you get distorted results on reconciliation. In other words, reconciliation only provides comparability when it compares companies who are subject to the same accounting principles.

### Is Harmonization Worth It?

As discussed above, progress towards harmonization has been slow, and has occupied a great deal of regulators' time and energy.

However admirable the concept of an "Esperanto for accountants" may be, and however much pain has already been expended in getting to the point at which a workable set of global accounting principles exist, the time is right to stop and ask the question: are the interests of the investing public, issuers and regulators served by the creation of harmonized international accounting standards that do not reflect the complete lack of harmonization of the underlying regulatory regimes and business practices that apply to the companies whose financial position we are trying to record? Will the pressures of complying with these diverse regulatory regimes lead to international standards becoming subverted so that accounts prepared under them are not truly comparable across borders? In short, is harmonization worth the effort?

It will be worth it if international accounts will be used and if they serve to protect the investor, but both these points are debatable. I already outlined the questions that must be raised with respect to use by investors with respect to the question of investor protection, Professor Choi has stated

> [I]dentical accounting treatments do not necessarily make accounting reports of two firms comparable, so it does not necessarily follow that the interests of investor protection are being served by this policy. In fact, if markets are highly segmented and dominated by local investors, it could be argued that US investors would be better served by reading the same accounting reports available to the dominant [local] investors.

In other words, in order to have a level playing field, US investors should be focussing on access to the home country disclosure.

> The other point that bothers me about harmonization of accounting standards is that there is no way to ensure that harmonized standards stay harmonized. I am assuming that there will never be (at least not in my professional lifetime) a supranational body overseeing and approving securities offerings. This means that international standards, once developed, will be subject to interpretation by national regulatory bodies and courts. We see that already in the way in which the SEC comments on cashflows prepared for SEC filings in accordance with IASC. Different regulatory bodies and courts will by their nature interpret a set of common standards differently, and thus a body of precedent will be developed in each jurisdiction so that unless total reciprocity is granted, common standards will again diverge.

This brings me back to where I started. Investment bankers are encouraging foreign companies to come to the United States public markets. One of the costs of capital is the cost of reconciliation. We should be asking whether this is a cost that these companies should be willing to pay, or whether it risks driving those companies elsewhere. Thank you.

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# Acceptance and Observance of International Accounting Standards: An Empirical Study of Companies Claiming to Comply with IASs

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**Key Words:** International Accounting Standards; IASC; Comparability Project; Compliance with IASs

***Abstract:*** *This article reports on an empirical study of the accounting policies and disclosures of a sample of major companies from around the world claiming to comply with IASs in 1996. Specifically, the research addresses the extent of compliance with the IASs revised during the Comparability Project. The findings reveal significant noncompliance with IASs including: use of LCM for inventories; violation of the all-inclusive requirement for reporting profit/loss and of the strict definition of extraordinary items; failure to capitalize certain development costs; failure to provide all required disclosures for property, plant, and equipment, particularly those associated with revaluations; failure to comply with pension disclosure requirements; for companies operating in hyperinflationary economies, failure to restate foreign entities in accordance with IAS 29; and charging goodwill to reserves or amortizing goodwill over a period in excess of the 20 year limit. Noncompliance, as evidenced by the current research, is very problematic for the IASC as it strives to achieve an IOSCO endorsement and as IAS 1 Revised becomes effective for 1999 financial statements.*

Currently, the International Accounting Standards Committee (IASC) is completing an intensive work program to develop a core set of accounting standards for the purpose of cross-border securities market listings and capital raisings. The IASC and several of its major constituents hope these standards will be endorsed by the International Organization of Securities Commissions (IOSCO) and thus provide significant support for the acceptance and observance of International Accounting Standards (IASs). During the Comparability Project, the IASC revised ten IASs, effective 1995, to incorporate a more uniform approach. Additional standards have been and are currently being developed and introduced in accordance with the agreement with IOSCO to complete a core set of IASs by 1999.

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It would seem opportune at this critical point in the 25-year history of the IASC to assess the extent to which IASs are currently being accepted and observed by companies in practice. While compliance is an issue of substantial importance, the IASC is also concerned that companies claiming compliance may not in fact be complying with all of the requirements of IASs. In this regard, the President of the International Federation of Accountants (IFAC) has also criticized auditors for asserting that financial statements comply with IASs when the accounting policies and other notes show otherwise (Cairns, 1997). The recent revision of IAS 1 to require companies stating that they are in compliance with IASs to comply with all IASs without exception reflects these concerns.

The purpose of this research is to report on an empirical study of the accounting policies and disclosures of a sample of major companies from around the world claiming to comply with IASs in 1996. Companies that have voluntarily adopted IASs and claim to comply with them should provide a good test of IAS's relevance and feasibility in practice. The key research questions addressed are as follows:

- To what extent are companies claiming to comply with IASs doing so in practice?
- What are the most important areas of measurement and disclosure noncompliance?
- What are the implications of noncompliance for the acceptance and observance of IASs in the future?

## INTERNATIONAL HARMONIZATION PRESSURES

Pressures for the international harmonization of accounting have grown rapidly since the early 1970s when the IASC was established, along with the development of stock markets internationally and the growth of international investment. The benefits of international accounting standards include the reduction of investment risks and cost of capital worldwide, the lowering of costs arising from multiple reporting, the elimination of confusion arising from different measures of financial position and performance across countries, the encouragement of international investment, and the more efficient allocation of savings worldwide (Sharpe, 1998). However, while IASs issued during the 1970s and 1980s were recognized to have made some progress towards international harmonization, by the late 1980s the performance of the IASC was increasingly criticized because of the flexibility of IASs and a continuing lack of comparability across country borders.

An important development at this time was the agreement of the IASC and IOSCO in 1988 to work together to find a way to allow a company to list its securities in any foreign stock market on the basis of one set of financial statements conforming to IASs (Cairns, 1995). The IASC responded with its 1989 Comparability Project defined in Exposure Draft (E) 32, *Comparability of Financial Statements* (IASC, 1989). The aim of the proposals in E 32 was to eliminate most of the choices of accounting methods then permitted so as to enhance the credibility and acceptability of IASs by the international investment community.

The outcome of the Comparability Project was the revision of ten IASs, effective 1995, including the elimination of twenty hitherto permitted accounting methods (IASC, 1993). However, subsequent to completion of the Comparability Project,

**Table 1.** Sample Selection

| *Companies* | *Number* |
|---|---|
| Number of companies in initial sample provided by the IASC | 221 |
| Companies that do not claim to comply with international accounting standards in the annual report or are in noncompliance on more than two relevant standards | (32) |
| Companies that were acquired or otherwise merged with other companies that do not claim to comply with international accounting standards | (5) |
| Companies for which Worldscope Disclosure or Financial Times is not available | (82) |
| Companies in a regulated industry, banks, and nonprofit companies | (16) |
| Companies with sales less than 1 billion annually for 1995 | (33) |
| Duplicate companies | (3) |
| Companies for which an English annual report is not readily available | (1) |
| **Final sample** | **49** |

IOSCO indicated that further work would be required and provided a list of core standards that it might be willing to accept subject to the full program being completed by the end of 1999. This deadline was subsequently brought forward by the IASC to March 1998 and now late 1998 with the completion of the core standard on financial instruments.

While the endorsement of IOSCO's technical committee is yet to be received, the prospect of such an endorsement has led to growing support for the IASC by national standard-setters. IASs have been adopted by law in some countries (e.g., Malta) and by accountancy bodies (e.g., Malaysia and Singapore). In a recent noteworthy move, Belgium, France, Germany, and Italy have agreed to permit certain companies to use IASs in their consolidated financial statements instead of existing national requirements (IASC, 1998a). Perhaps most importantly, a growing number of companies are voluntarily adopting IASs, including multinationals such as Bayer, Fiat, Lafarge, Nestle, and Nokia. The nature and extent of compliance with IASs by these companies is the focus of this research.

## METHODOLOGY

### Sample Selection

A list of 221 companies claiming to comply with IASs in one or more years was obtained from the IASC in late 1996. The IASC has publicized the fact that these companies have stated their voluntary commitment to comply with IASs. A search was conducted in *WorldScope* and the *Financial Times* databases for information on each of these companies. Companies not represented in at least one of these databases were excluded on significance grounds. Annual reports for 1996 were requested for companies that met the following additional significance criteria:

- 1995 sales of at least $1 billion
- Nonregulated, nonfinancial industry, by reference to SIC code

**Table 2.** Companies in Final Sample (by Country), $n = 49$

| *Company* | *Country* | *1995 Sales (in U.S. dollars)* |
|---|---|---|
| Alcan Aluminum | Canada | 9,287,000,000 |
| Dominion Textile | Canada | 1,041,193,000 |
| Huhtamaki | Finland | 1,788,162,000 |
| Metra | Finland | 2,422,906,000 |
| Nokia | Finland | 8,400,410,000 |
| Aerospatiale | France | 10,035,705,000 |
| Bongrain | France | 2,022,888,000 |
| Eridania Beghin-Say | France | 10,357,819,000 |
| Essilor | France | 1,332,902,000 |
| Lafarge | France | 6,772,154,000 |
| Moulinex | France | 1,599,017,000 |
| Renault | France | 37,525,332,000 |
| Saint-Gobain | France | 14,334,100,000 |
| Usinor | France | 15,988,097,000 |
| Valeo | France | 5,143,640,000 |
| Bayer | Germany | 31,022,776,000 |
| Heidelberger Zement | Germany | 4,202,161,000 |
| Schering | Germany | 3,234,122,000 |
| Jardine Matheson | Hong Kong | 10,636,000,000 |
| Fiat | Italy | 47,101,950,000 |
| Olivetti | Italy | 6,160,292,000 |
| Pirelli | Italy | 6,862,794,000 |
| Fujitsu | Japan | 37,626,504,000 |
| Kirin Brewery | Japan | 15,794,011,000 |
| Toray | Japan | 10,400,798,000 |
| Multi-Purpose Holdings | Malaysia | 1,131,061,000 |
| Kvaerner | Norway | 4,682,922,000 |
| AECI | South Africa | 1,838,980,000 |
| South African Breweries | South Africa | 7,189,845,000 |
| AGA | Sweden | 1,984,015,000 |
| Astra | Sweden | 5,352,100,000 |
| Atlas | Sweden | 3,655,873,000 |
| Autoliv | Sweden | 1,525,050,000 |
| Esselte | Sweden | 1,687,020,000 |
| Perstorp | Sweden | 1,918,347,000 |
| Stora | Sweden | 8,537,347,000 |
| Trelleborg | Sweden | 3,184,948,000 |
| Alusuisse-Lonza | Switzerland | 6,490,460,000 |
| Electrowatt | Switzerland | 2,501,036,000 |
| Forbo | Switzerland | 1,548,005,000 |
| Georg Fischer | Switzerland | 1,958,403,000 |
| Holderbank | Switzerland | 7,166,369,000 |
| Jelmoli | Switzerland | 1,623,741,000 |
| Nestle | Switzerland | 48,946,210,000 |
| Oerlikon-Buhrle | Switzerland | 3,129,112,000 |
| Saurer | Switzerland | 1,127,091,000 |
| Sika | Switzerland | 1,166,264,000 |
| Sulzer | Switzerland | 4,973,997,000 |
| Von Roll | Switzerland | 1,530,327,000 |

**TABLE 3.** Statements Regarding Compliance with IASs

| *Company* | *Footnote on Accounting Principles* | *Audit Opinion* |
|---|---|---|
| **PANEL A: COMPANIES THAT NOTE FULL COMPLIANCE WITH IASs** | | |
| AGA | Recommendations of Swedish Financial Accounting Standards Board (in all essential aspects in accordance with IASC rules; differences do not concern AGA) | Swedish Companies Act |
| Alcan Aluminum | • Canada GAAP<br>• In all material respects with principles established by IASC (Responsibility for annual report) | Canadian GAAP |
| Alusuisse-Lonza | Current IAS, published by IASC | • IASs of the IASC<br>• 4th and 7th EU Directives<br>• Swiss Law<br>• Listing Rules of Swiss Exchange |
| Bayer | • German law<br>• Rules issued by IASC (current version) | • Fully complied with IASs<br>• German law |
| Bongrain | • Internationally accepted principles set forth by IASC<br>• Provisions of the Law | True and fair view |
| Dominion Textile | • Canadian GAAP<br>• In all material respects with standards of IASC | Generally accepted accounting principles |
| Essilor | Accounting principles recommended by the IASC | Present fairly… |
| Forbo | • IASs as issued by IASC<br>• Swiss Code of Obligations | The law and articles of incorporation |
| Heidelberger Zement | • German Commercial Code<br>• Standards of IASC (Significant items requiring different treatment under IAS and HGB not present) | Standards of IASC |
| Holderbank | • IASs as published by IASC (since 1991)<br>• Swiss Accounting and Reporting Recommendations | The law and articles of incorporation. |
| Jardine Matheson | IASs | • IASs<br>• Bermuda Companies Act |
| Jelmoli | IASs issued by IASC | The law and articles of incorporation |
| Moulinex | • French GAAP<br>• Principles formulated by IASC | True and fair view |
| Multi-Purpose Holdings | • Companies Act 1965<br>• IASs adopted by Malaysian Institute of Accountants | Companies Act 1965 |
| Nestle | IASs issued by IASC | • IAS<br>• The law |
| Pirelli | • Legislative Decree No. 127<br>• Standards issued by the IASC… | True and fair view |
| Saurer | • IASs<br>• Swiss Accounting and Reporting Recommendations | The law and articles of incorporation. |

*(continued)*

**TABLE 3.** (Continued)

| *Company* | *Footnote on Accounting Principles* | *Audit Opinion* |
|---|---|---|
| **PANEL A: COMPANIES THAT NOTE FULL COMPLIANCE WITH IASs** | | |
| Sika | Regulations of IASC | IASs<br>The law |
| Sulzer | Standards formulated by IASC | Full compliance with IASs (for first time) |
| Trelleborg | Swedish Financial Accounting Council's recommendations (in substance correspond with IASC's regulations) | Swedish Companies Act |
| ***PANEL B: COMPANIES THAT NOTE FULL COMPLIANCE WITH IASs WITH LIMITED EXCEPTIONS*** | | |
| Aerospatiale | Internationally accepted accounting principles as recommended by IASC (except IAS 8, profit and loss, and IAS 32, financial instruments) | Present fairly… |
| AECI | • GAAP in South Africa<br>• In most respects conform to IASs | • GAAP<br>• Companies Act |
| Astra | • Swedish Financial Accounting Standards Council<br>• In most respects IASs (exception, IAS 19 pensions) | Swedish Companies Act |
| Atlas | With few exceptions, IAS (Exceptions, translation of foreign subsidiaries and amortization of goodwill) | Swedish Companies Act |
| Autoliv | In all material respects, IASs (Exception, for reasons of competition, sales and income are not by country) | Swedish Companies Act |
| Eridania Beghin-Say | • French legislation<br>• Standards formulated by IASC (exception, IAS 22 concerning amortization periods for goodwill) | True and fair view |
| Electrowatt | • EU's 4th and 7th Directives<br>• Guidelines of IASC (exception, goodwill) | • 4th and 7th Directives of EU<br>• IAS of IASC |
| Esselte | • Recommendations of Financial Accounting Standards Council<br>• Guidelines formulated by IASC (exception pensions reported per accounting practices in countries where Esselte has operations) | Swedish Companies Act |

(*continued*)

**TABLE 3.** (Continued)

| *Company* | *Footnote on Accounting Principles* | *Audit Opinion* |
|---|---|---|
| ***PANEL B: COMPANIES THAT NOTE FULL COMPLIANCE WITH IASs WITH LIMITED EXCEPTIONS*** | | |
| Fiat | Italian legislation (consistent with IASs, except IAS 9 requirement that development costs be capitalized) | True and fair view |
| Fujitsu | IASs (exceptions, translation of foreign currency accounts -and IAS 2 LCNRV—both not significant | Accounting principles generally accepted in Japan |
| Georg Fischer | • IASs (since 1993) (exception, for structural reasons information per segment on operating income and total assets)<br>• $4^{th}$ and $7^{th}$ directives of the EU<br>• Swiss shareholding law<br>• Swiss Accounting and Reporting Recommendations | • IASs of IASC<br>• $4^{th}$ and $7^{th}$ Directives of the EU<br>• Swiss law<br>• Accounting principles for Listing Rules of the Swiss Exchange |
| Huhtamaki | • Accounting standards issued by IASC<br>• Finnish Accounting Standards (differences between FAS and IAS have largely disappeared except for depreciation on revalued tangible assets, untaxed reserves and taxation, and associated companies | Finnish accounting act |
| Kirin | Japanese Accounting Principles (differs from IASs for Consolidation and equity method of accounting, Tax effect accounting, Leases, and Marketable and investment securities) | IAS in all material respects, expect as described in Note 2 |
| Kvaerner | • Norwegian GAAP<br>• Broadly in compliance with IASs thus a note for reconciliation has not been made | Kjoint Stock Companies Act |
| Lafarge | • IAS (exception maximum amortization period for goodwill)<br>• Provisions of French accounting legislation | • Accounting principles generally accepted in France<br>• IASs, except for amortization of goodwill |
| Metra | Finnish accounting legislation and regulations (which in all essential respects correspond with IASs) | Accounting Act governing preparation of financial statements in Finland |
| Nokia | IASs and Finnish Accounting Standards (two sets of accounts of separate pages)<br>Reconciliation between the financial statements under FAS and IAS presented | • IAS<br>• Regulations governing preparation of financial statements in Finland<br>• (Provides Finnish and IAS accounts) |

*(continued)*

**TABLE 3.** (Continued)

| *Company* | *Footnote on Accounting Principles* | *Audit Opinion* |
|---|---|---|
| ***PANEL B: COMPANIES THAT NOTE FULL COMPLIANCE WITH IASs WITH LIMITED EXCEPTIONS*** | | |
| Oerlikon-Buhrle | IAS (exceptions, segment information includes results by product groups, but not the results by geographic region and development costs at Group risk are not capitalized) | IAS with exceptions described in financial statements |
| Olivetti | Legislation by Italian accounting profession and, in absence thereof, by IASC | True and fair view |
| Perstorp | • Swedish Financial Accounting Standards Council's recommendations<br>• In all important respects, IASC's recommendations, which fulfill requirements imposed on foreign companies listed on London Stock Exchange (exception, for practical reasons, does not fully adhere to IAS 7 regarding statements of changes in financial position) | Swedish Companies Act |
| Renault | • French regulations<br>• IASs (exception, IAS 9 which requires capitalization of development costs, like other worldwide automobile manufacturers expenses such costs) | True and fair view |
| Saint- Gobain | • French law<br>• IASs (exception, IAS 22 on goodwill amortisation period) | Accounting principles described in the notes |
| Schering | • German Commerical Code<br>• Standards of IASC observed where they do not conflict with German Code (Differences due to principles of recognition and prudence —not material) | Standards of IASC |
| South African Breweries | • GAAP in South Africa<br>• Standards of IASC (Exception goodwill) | Generally accepted accounting practice Companies Act |
| Stora | • Recommedations of Swedish Financial Accounting Standards Council<br>• Recommendations issued by IASC (exceptions, reporting of hydropower assets sold on a sale and leaseback basis, capitalization of interest expense in connection with major investments, revaluations of fixed assets, reporting of proposed dividend as a liability, statement of changes in financial position) | Swedish Companies Act |

(*continued*)

**TABLE 3.** (Continued)

| *Company* | *Footnote on Accounting Principles* | *Audit Opinion* |
|---|---|---|
| ***PANEL B: COMPANIES THAT NOTE FULL COMPLIANCE WITH IASs WITH LIMITED EXCEPTIONS*** | | |
| Toray | • Accounting principles generally accepted in Japan.<br>• Overseas subsidiaries accounting practices prevailing in their respective domicile countries, but any significant departures from IASs which affect net income and net assets, are adjusted to comply with IAS and such adjusted financial statements are used for the purpose of consolidation | • Generally accepted accounting principles in Japan |
| Unisor | • French generally accepted accounting principles<br>• IASs as prescribed by the IASC (exception, a non-recurring adjustment)<br>• Summarizes differences with US GAAP | Conform with GAAP in France |
| Valeo | • French GAAP<br>• IASs, (exception, IAS 9, like other international groups in automotive sector continues to expense these costs as incurred) | In accordance with French and international GAAP |
| Vonroll | • IASs as published by IASC<br>• Recommended Swiss accounting principles. | • IASs (exception, value adjustment for steel activities recorded to equity without affecting the 1996 income statement, not in accordance with IAS 8<br>• Accounting Reporting Recommendations<br>• The law |

## Data Collection

Each annual report was reviewed to confirm that the company claimed to comply with IASs in 1996. This information was located in the note on accounting principles and/or in the audit opinion. Companies were included in the sample if the annual report stated that IASs were followed, that IASs were followed with limited exceptions, or that exceptions to IASs were immaterial in nature. Companies noting noncompliance with more than two relevant IASs (i.e., one of the ten revised IASs resulting from the Comparability Project) were excluded.[1] Table 1 summarizes the sample selection procedure. The final sample consists of the 49 companies listed in Table 2. The companies are geographically dispersed, with

**Table 4.** Compliance with IASs Revised During the Comparability Project

| | *Number in Compliance* | *Number in Noncompliance* | *Comments* |
|---|---|---|---|
| ***PANEL A: IAS 2, INVENTORIES*** | | | |
| **Method** | | | |
| Cost Formula | • 18 FIFO<br>• 12 Weighted Average<br>• 12 combination of IASC benchmark methods | • 1 industry practice (market price)<br>• 1 Simplified procedures and market value where permissible | 5 ND |
| Impairment | • 34 LCNRV<br>• 1 Both LCNRV and LCM (immaterial) | • 13 LCM<br>• 1 Both LCNRV and LCM | |
| **Disclosures** | | | |
| Any reversal of write-down recognized as expense reduction in period reversal occurs | 2 | 0 | 47 Likely NA |
| Amount of any reversals of write-downs recognized in period | 1 | 0 | 48 Likely NA |
| Circumstances leading to any reversals of write-downs | 1 | 0 | 48 Likely NA |
| Carrying amount of inventories carried at NRV | 14 | 1 | 34 Likely NA |
| Carrying amount of inventories pledged as collateral | 11 | 0 | 38 Likely NA |
| Either cost of inventories recognized as expense during the period, or operating costs, applicable to revenues, recognized as an expense during the period, classified by their nature | • 44<br>• 1 operating profit before interest (interest charges, which were significant, classified in a footnote) | 4 disclosed sales less operating costs applicable with no breakdown of operating expenses | |
| Total carrying amount of inventory | 49 | 0 | |
| Accounting policies, including cost formula | 44 | 5 | |
| Carrying amount of inventories in classifications appropriate to enterprise | 45 | 2 | 2 Likely NA |
| ***PANEL B: IAS 8, NET PROFIT/LOSS*** | | | |
| **Method** | | | |
| All items of income/ expense included in net profit/loss for period | 36 | 13 | |
| Profit/loss from ordinary activities disclosed on income statement | 49 | 0 | |

*(continued)*

**Table 4.** (Continued)

| | | | |
|---|---|---|---|
| ***PANEL B: IAS 8, NET PROFIT/LOSS*** | | | |
| Extraordinary items disclosed on income statement | | 10 in noncompliance with the IASC's strict definition. See Table 5. | 39 NA |
| **Disclosure** | | | |
| Both amount and nature of each extraordinary item | 10 | 0 | 39 NA |
| ***PANEL C: IAS 9, RESEARCH AND DEVELOPMENT*** | | | |
| **Method** | | | |
| Research | 40 expenses all | 3 ND despite significant R&D activity (1 acknowledges non-compliance) | 6 NA |
| Development | • 1 expenses all development costs<br>• 8 capitalize development costs | • 3 ND despite significant R&D activity (1 acknowledged noncompliance)<br>• 4 acknowledge noncompliance and expense all development costs | • 27 expense all development cost (cannot ascertain compliance or noncompliance)<br>• 6 NA |
| Any capitalized development costs amortized on a systematic basis over 5 years or less | 4 (of 8) | | • 2 ND<br>• 2 NA |
| Any capitalized development costs tested for impairment in subsequent periods and discussion of write-back of previously written-down capitalized development costs | 2 (of 8) | | • 6 ND |
| **Disclosure** | | | |
| Accounting policy | 33 (of 43) | 10 | |
| Amount of R&D charged to expense during the period | 33 (of 43) | 10 | |
| Amortization methods used | 4 (of 8) | 2 | 2 NA |
| Useful lives of assets used in R&D activities or amortization rates used | 4 (of 8) | 2 | 2 NA |
| Reconciliation of the balance of unamortized development costs at the beginning and end of the period | 1 (of 8) | 5 | 2 NA |
| ***PANEL D: IAS 16, PROPERTY, PLANT, AND EQUIPMENT*** | | | |
| **Method** | | | |
| Measurement after initial recognition | • 25 historical cost, benchmark<br>• 11 revaluations for specific groups of PPE, alternative | 1 revaluing fixed assets acknowledges noncompliance | 12 revaluations per company law or tax regulations |

*(continued)*

**Table 4.** (Continued)

| | | | |
|---|---|---|---|
| ***PANEL D: IAS 16, PROPERTY, PLANT, AND EQUIPMENT*** | | | |
| Revaluations made with sufficient regularity | 6 (of 12 electing to revalue fixed assets) | 6 | Likely not possible for revaluations per company law or tax regulations |
| Revaluations applied to the entire class of PPE | 11 (of 12 electing to revalue fixed assets) | | • Likely not possible for revaluations per company law or tax regulations<br>• 1 ND |
| Depreciation allocated on systematic basis over useful life | 49 | 0 | |
| **Disclosure** | | | |
| Measurement base | 49 | 0 | |
| When more than one measurement base used, carrying amount for that basis in each category | 15 (of 24) | 9 (8 per company law or tax regulations) | |
| **Depreciation Methods** | • 37 straight-line<br>• 9 straight-line plus an accelerated method<br>• 2 declining balance<br>• 1 rates for asset groups | 0 | |
| **Depreciation Disclosure** | | | |
| Useful lives or depreciation rates | 43 | 6 | |
| Gross carrying amount and accumulated depreciation at beginning and end of each period | 47 | 2 | |
| Reconciliation of carrying amount at beginning and end of each period | 34 | 15 | |
| **General Disclosures** | | | |
| Whether in determining recoverable amount of items of PPE, expected future cash flows discounted | 0 | 6 | 43 Likely NA |
| Existence and amounts of title restrictions and PPE pledged as collateral | 26 | 0 | 23 Likely NA |
| Accounting policy for restoration costs related to PPE | 2 | 0 | 47 Likely NA |
| Amount of expenditures on account of PPE in course of construction | 41 | 0 | 8 Likely NA |
| Amount of commitments for the acquisition of PPE | 28 | 0 | 21 Likely NA |
| **Revaluation Disclosures** | | | |
| Basis used to revalue assets | • 8 (of 12 electing to revalue)<br>• 12 (of 12 revaluing due to company law or tax regulations) | 4 (of 12 electing to revalue) | |

*(continued)*

**Table 4.** (Continued)

| | | | |
|---|---|---|---|
| ***PANEL D: IAS 16, PROPERTY, PLANT, AND EQUIPMENT*** | | | |
| Effective date of revaluation | • 6 (of 12 electing to revalue)<br>• 5 (of 12 revaluing due to company law or tax regulations) | 6 (of 12 electing to revalue) 7 (of 12 revaluing due to company law or tax regulations) | |
| Whether an independent valuer was involved | • 4 (of 12 electing to revalue)<br>• 12 (of 12 revaluing due to company law or tax regulations) | 8 (of 12 electing to revalue) | |
| Nature of indices used to determine replacement costs | • 4 (of 12 electing to revalue)<br>• 1 (of 12 revaluing due to company law or tax regulations) | 8 (of 12 electing to revalue) | May be viewed as NA for most (11) of the 12 revaluing due to company law or tax regulations |
| Carrying amount of each class of PPE if the assets had been carried at cost less depreciation | • 11 (of 12 electing to revalue)<br>• 4 (of 12 revaluing due to company law or tax regulations) | • 1 (of 12 electing to revalue)<br>• 8 (of 12 revaluing due to company law and tax regulations) | |
| Revaluation surplus, indicating movement for the period and any restrictions on the distribution of the balance to shareholders | • 10 (of 12 electing to revalue)<br>• 2 (of 12 revaluing due to company law or tax regulations) | 2 (of 12 electing to revalue) | May be viewed as NA for most (10) of the 12 revaluing due to company law or tax regulations |
| ***PANEL E: IAS 18, REVENUE*** | | | |
| **Disclosure** | | | |
| Accounting policy | 22 | 27 | |
| ***PANEL F: IAS 19, RETIREMENT BENEFITS*** | | | |
| **Defined Contribution Plans** | | | |
| General Description of Plan | 5 (of 10) | 5 | |
| Amount recognized as expense | 7 (of 10) | 3 | |
| Any significant matters that affect comparability | | | Likely NA |
| **Defined Benefit Plans** | | | |
| **Method** | | | |
| Amortization period for past service cost and plan amendments | 11 (of 23) | | Cannot ascertain if remaining 12 NA or noncompliance |
| Actuarial valuation period | • 12 (of 23) accrued benefit (benchmark)<br>• 2 projected benefit (alternative) | | 9 ND |
| Actuarial assumptions, incorporate projected salary levels | 21 (of 23) | | 2 ND |
| Actuarial assumptions, all to be based on long-term considerations | 16 (of 23) | | 7 ND |

*(continued)*

**Table 4.** (Continued)

| | | | |
|---|---|---|---|
| ***PANEL F: IAS 19, RETIREMENT BENEFITS*** | | | |
| **Defined Benefit Plans Disclosures** | | | |
| General description of plan | 9 (of 23) | 14 | |
| Accounting policies | 17 (of 23) | 6 | |
| Whether or not plan is funded | 22 (of 23) | 1 | |
| Amount recognized as expense | 15 (of 23) | 8 | |
| Actuarial present value of promised retirement benefits | 18 (of 23) | 5 | |
| Fair value of plan assets | 21 (of 23) | 2 | |
| If amounts funded since inception of plan differ from amounts recognized as expense/income over the same period, amount of liability/assets and funding approach adopted. When more than one plan exists and this results in both a liability and an asset, both are presented (no netting) | | | Likely NA for all sample companies |
| The principal actuarial assumptions used in determining cost of retirement benefits and any significant changes in assumptions | 19 (of 23) | 4 | |
| Date of the most recent actuarial valuation and the frequency with which valuations are made | 16 (of 23) | 7 | |
| Any other significant matters, including effects of a plan termination, curtailment, or settlement, that affect comparability | | | Likely NA for all sample companies |
| ***PANEL G: IAS 21, FOREIGN CURRENCY*** | | | |
| **Method** | | | |
| Foreign Currency Transactions | 35 | 2 method eliminated by Comparability Project | • 10 hedge to minimize impact<br>• 2 NA |
| Foreign Enterprises | 3 temporal method | None | 46 NA |
| Foreign Entities | 45 current rate method | 3 (one immaterial) | 1 NA |
| Hyperinflationary economies | 7 (of 20) | • 5 temporal<br>• 5 current rate<br>• 3 monetary/nonmonetary | 29 do not mention operations in hyperinflationary economies |
| **Disclosure** | | | |
| Amount of exchange differences included in the net profit/loss | 33 | 15 | 1 NA |

*(continued)*

**Table 4.** (Continued)

| | | | |
|---|---|---|---|
| *PANEL G: IAS 21, FOREIGN CURRENCY* | | | |
| Net exchange differences classified as equity as a separate component of equity and reconciliation of amount of such exchange differences at beginning and end of period | 44 (1 omits reconciliation) | 3 | 2 NA |
| Amount of exchange differences arising during period which is included in carrying amount of an asset | | | 49 Likely NA |
| When reporting currency is different from currency of country in which enterprise is domiciled, reason for using a different currency and reason for any change in reporting currency | 1 (of 2) | 1 | 47 Report in local currency, thus NA |
| *PANEL H: IAS 22, BUSINESS COMBINATIONS* | | | |
| **Method** | | | |
| Accounting for business combinations | 31 report combinations accounted for as purchases | | • 0 report combinations accounted for as poolings<br>• 18 provide no footnote information on business combinations |
| Goodwill recognized as asset and amortized on systematic basis | 42 | 4 charge to reserves | 3 NA (no goodwill on books) |
| Goodwill amortization method | 42 (of 42), benchmark straight line | | |
| Goodwill amortization period | • 4 (of 42), benchmark 5 years<br>• 33, alternative 20 years or less | 5, 40 years | |
| **Disclosures for all business combinations** | | | |
| Names and descriptions of combining enterprises | 30 (of 31 disclosing that a business combination was accounted for as a purchase) | 1 | |
| Method of accounting | 25 (of 31) | 6 | |
| Effective date for accounting purposes | 26 (of 31) | 5 | |
| Any operations resulting from combination the enterprise has decided to dispose of | 13 (of 31) | 0 | 18 likely NA |

(*continued*)

**Table 4.** (Continued)

| | | | |
|---|---|---|---|
| ***PANEL H: IAS 22, BUSINESS COMBINATIONS*** | | | |
| **Disclosures for acquisitions** | | | |
| Percentage voting shares acquired | 30 (of 31) | 1 | |
| Cost of acquisition | 20 (of 31) | 11 | |
| Nature and amount of provisions for restructuring and other plant closure expenses arising as a result of the acquisition and recognized at date of acquisition | 5 (of 31) | | 26 likely NA |
| **Disclosures goodwill** | | | |
| Accounting treatment | 42 (of 42) | | |
| Period of amortization | 42 (of 42) | | |
| When useful life or amortization period exceeds 5 years, justification for period adopted | 24 (of 38—only 9 provide a specific justification thereby adhering to the spirit of the IASC disclosure requirement) | 14 | |
| When not amortized on straight line basis, basis used and why | | | Likely NA for all sample companies |
| Reconciliation at beginning and end of period | 29 (of 42) | 13 | |
| ***PANEL I: IAS 23, BORROWING COSTS*** | | | |
| Accounting Method | • 6 benchmark, expense<br>• 14 alternative, capitalize | | 29 NA |
| **Disclosure** | | | |
| Accounting method | 20 (of 20) | 0 | |
| For alternative, amount capitalized | 6 (of 14) | 8 | |
| For alternative, capitalization rate | 0 (of 14) | 14 | |

*Notes:* ND: not disclosed;
NA: not applicable.

the most companies coming from Switzerland (12), France (10), and Sweden (8). Nine additional countries are represented in the sample (i.e. Canada, Finland, Germany, Hong-Kong, Italy, Japan, Malaysia, Norway and South Africa).

The 1996 annual reports for the 49 companies meeting our selection criteria were comprehensively examined to determine the extent of compliance with IASs. Our tests for compliance focused on both measurement and disclosure issues for the IASs revised during the Comparability Project. IAS 11, *Construction Contracts,* was not applicable for most companies in our sample, and was excluded from the anlaysis.

One researcher carefully examined each annual report using a survey instrument and noted the measurement practice utilized and the disclosures provided. The survey instrument was based on a review of the text of the revised IASs and summaries prepared by the IASC regarding key modifications resulting from the Comparability Project (IASC March 1995a and December 1995b). To increase reliability, another researcher compared the data to that provided by *WorldScope*.[2] In instances where inconsistencies were identified, the annual report was examined by the second researcher. Discrepancies between the original data set and *WorldScope* were identified and resolved by the second researcher revisiting the annual report. The second review confirmed the original data and very few modifications to the data set were required. The second researcher also carefully examined the data set to confirm the consistency and logic of the entries.[3]

While summarizing the findings, a researcher other than the one who initially collected the data revisited several annual reports to provide illustrations. This exercise provided an additional check on the accuracy of the data. When the data set indicated widespread non-compliance, detailed lists of disclosures provided by the companies were compiled and carefully reviewed by the researchers to further ensure data accuracy. Such lists were compiled for the all-inclusive income requirement of IAS 8; extraordinary items; translation of foreign entities operating in hyperinflationary economies; pensions; capitalization of development costs; and revaluations of property, plant, and equipment.

## FINDINGS

The note disclosing the company's accounting policies and/or the audit opinion were the sources of information about compliance with IASs. From this it was evident that only 20 companies noted full compliance with IASs (see Table 3, Panel A) while 29 companies noted compliance with some limited exceptions (see Table 3, Panel B).

The results of the analysis of the extent of compliance with IASs in respect of both measurement issues and disclosure requirements are summarized in Table 4. Each of the relevant IASs will now be discussed in the context of the survey results.

### IAS 2 Inventories

#### *Measurement*

As issued in 1975, IAS 2 allowed use of the FIFO, weighted average, LIFO, and base stock costing methods (Epstein and Mirza, 1997). During the Comparability Project, it was determined that LIFO and base stock should be eliminated. However, the IASC found it

necessary to accept the continued existence of LIFO due to its popularity in certain countries. As revised, IAS 2 endorses FIFO and weighted average as the benchmark methods; LIFO is now the allowed alternative.

Most sample companies use an IASC benchmark method or some combination of benchmark methods (see Table 4, Panel A). None use the IASC allowed alternative for financial statement preparation. However, one company indicates that adjustments are made for inventories valued on a LIFO basis (to arrive at weighted average). Other methods utilized by two companies included:

- Industry practice whereby the cost of dairy products is valued according to dairy-market price
- Simplified valuation procedures, where permissible, and current market value

These two companies are not in compliance in that IAS 2 Revised specifically eliminated current cost as an acceptable inventory costing method. Five companies do not disclose their inventory costing method.

### *Impairment: Lower of cost or net realizable value (LCNRV)*

Most comply with the IAS 2 requirement that inventories be carried at LCNRV. Alternatively, 13 carry inventories at lower of cost or market (LCM). Two carry some inventories at LCNRV and others at LCM. One company, which acknowledges noncompliance in its accounting policy footnote, states: "IAS 2 requires that inventories be valued at lower of historical cost or NRV. Had IAS 2 been applied, the difference...would not have been significant."

### *Disclosures*

There are very few examples of noncompliance with IAS 2 disclosures (Table 4, Panel A). Of the 14 that disclose the carrying amount of inventories carried at LCNRV (or LCM), three provide a footnote listing inventories by classification (raw materials, work-in-process, finished products, etc.) and for each classification disclose the gross value, write-downs (allowance), and net inventory. Ten disclose a provision for obsolescence for total inventories, and one notes the amount of stocks carried at lower market prices as compared to purchase or production costs. The disclosure is likely not applicable for most of the remaining companies.

Only two companies disclose that the reversal of a write-down is recognized in income in the period the reversal occurs. One of the two companies discloses the amount of such reversals recognized during the period. In a footnote on supplemental income, this company includes a section on inventories that discloses "new provisions" and "writebacks" for 1995 and 1996. The circumstances leading to the reversals can be inferred from the company's inventory valuation method whereby dairy products are valued according to the year's dairy market price. The other company recognizes no reversals during 1996; thus, the additional disclosures are not applicable. For the 47 remaining companies, in that economic events that justify reversals of

write-downs are rare and the IASC allows but does not require reversals when such events occur, disclosures regarding reversal of inventory write-downs are likely not applicable.

In summary, notable examples of noncompliance include:

- Two use inventory valuations not endorsed by IAS 2;
- Thirteen use LCM as opposed to LCNRV;
- Some disclosures are not provided. For example, five fail to disclose their valuation method.

## IAS 8 Net Profit/Loss for the Period

As a new requirement under IAS 8 Revised, all items of income/expense must be included in net profit/loss unless prohibited by an IAS. Exceptions to the all-inclusive requirement are: revaluation surplus, gain/loss on translation of foreign currency statements, correction of fundamental errors, and effects of changes in accounting policy. Thirteen companies (Table 4, Panel B) violate the all-inclusive requirement by allowing at least one of the following non-owner changes in equity to bypass income:

- Captive insurance contingency reserve
- Legal and statutory reserves
- Consolidated goodwill charged to reserves
- Operating subsidies
- Bonuses to directors and statutory auditors
- Untaxed reserves
- Reserves provided by Company's By-Laws
- Ordinary reserves and sundry reserves
- Capital redemption reserve fund
- Income reserves
- Restricted reserves

In its accounting policy footnote, one of these companies acknowledges violating the all-inclusive requirement and states that it complies with IASs with the exception of a value adjustment for steel activities recorded to equity without affecting the 1996 income statement, which is not in accordance with IAS 8.

### *Profit/loss from Ordinary Activities and Extraordinary Items*

IAS 8 requires that profit/loss from ordinary activities and extraordinary items each be separately reported on the face of the income statement and that the amount and nature of each extraordinary item be disclosed either on the face of the income statement or in the notes. All 49 companies disclose profit/loss from ordinary activities on the face of the income statement.

While extraordinary items should be rare under the IASC's revised definition, ten companies report extraordinary items in 1996. Indicative of noncompliance with the

**TABLE 5.** Extraordinary Items And Special Items Reported By Sample Companies

| *PANEL A: EXTRAORDINARY ITEMS* |
|---|
| French<br>Income on **sale or scrapping of fixed assets** (96/95/94)<br>Differences between **restructuring costs** and provisions set aside previously (96 and 95)<br>Provisions for **restructuring** at subsidiaries (96/95)<br>Provisions for litigation (96 and 95)<br>Other extraordinary items/expenses (96, 95, and 94) |
| French<br>Subsidies and other (96 and 95)<br>• capital **gains and losses on the disposal of fixed assets** |
| French<br>**Gains on disposals of investments** (96/95)and fixed assets (96/95)<br>Other income including out of period income (96/95)<br>**Losses on disposals of investments** (96/95) **and fixed assets** (96/95)<br>Taxes related to prior years (96/95)<br>Other expenses including extraordinary accrual (96/95)<br>Out of period expenses (96/95) |
| French<br>**Restructuring costs** and provisions (94/95/96)<br>**Disposals of businesses** (94/95/96)<br>Write off of capitalized research and development costs (94/95/96)<br>Miscellaneous charges and provisions (94/95/96) |
| Swiss<br>Gains on sales of real estate (96/95)<br>**Gains on sales of investments** (96/95)<br>Other extraordinary income (96/95)<br>Loss on sales of real estate (96/95)<br>**Loss on sales of investments** (96)<br>Amortization of goodwill (96/95)<br>Other extraordinary expenses (96/95).<br>• Complete closing expenses for a joint venture and extraordinary expenses in excess of provisions previously made for capacity adjustments in a US operation whose operations are substantially independent of the other activities of the Group. |
| Swiss<br>Extraordinary income (96, 95)<br>• Liquidation of no longer necessary provisions for contingent risks and pending legal disputes<br>Extraordinary expense (96, 95)<br>• Reorganization expenses for a division as well as losses from divestitures of participations<br>Extraordinary depreciation (96, 95)<br>**Liquidations of unnecessary plant and equipment** |
| Italian<br>**Gains on disposals** (96/95)<br>Other income (96/95)<br>**Losses on disposals** (96/95)<br>Other expense (96/95) **(losses arising from the sale of assets)**<br><br>Financial review: for an improved understanding of performance, a reclassified consolidated statement of income prepared after re-elaboration by reclassification and regrouping of the statement of income as required by the provisions of Italian Legislative Decree no 127/1991. The new format does not provide for separation of operations from financial and extraordinary components (in the past, the latter were identified by excluding from operations all events not directly relatable to turnover), assuming instead the ordinary nature of almost all the company's operational activities (as indicated by IAS no. 8). A distinction is however made between recurring and non-recurring economic items to facilitate interpretations of the result for the year. |

(*continued*)

**TABLE 5.** (Continued)

| *PANEL A: EXTRAORDINARY ITEMS* |
|---|
| Italian<br>**Gains on disposals** ( 96/95)<br>Miscellaneous ( 96/95)<br>• (exchange gains on reimbursement to X of a part of the share capital of Y)<br>**Losses on disposals** (96/95)<br>Miscellaneous (96/95)<br>• reorganization and **restructuring costs**, amounts accrued by US companies to comply with FAS 106 and connected to land reclamation of abandoned areas and other expenses |
| Finnish<br>Discontinued operations (96)<br>**Gain on sale of fixed assets** (95)<br>Write off of shares (95)<br>Other expenses (95/96) |
| Malaysian<br>**Profit on sale of land and buildings** (95/96) and minority interests (96/95)<br>**Profit/loss on the sale** of quoted subsidiary, other **investments**, and **land and buildings** (96)<br>Surplus on compulsory acquisition of freehold land (96)<br>Provision for diminution in value of plant and machinery (96)<br>Retrenchment benefits (96)<br>Other (96) |
| *PANEL B: SPECIAL ITEMS LISTED ON INCOME STATEMENT FOLLOWING OPERATING INCOME* |
| Abnormal items:<br>• long term provisions (explosive closures, environmental remediation, post-employment medical and benefits, net costs of business closures and disposals and other costs)<br>• liquidation dividend |
| Non-recurring expense, net |
| Exceptional income (restructuring costs, provisions for group risks, prior year adjustment, disposals of assets, other income-net) |
| Exceptional income:<br>• gains on sold businesses less realized divestment expenses and potential future expenses, expenses arising from changes in corporate structure and the effect of change in accounting policy relating to those divestments are also deducted<br>Exceptional expense:<br>• changes related to current and forthcoming restructurings<br>• loss on exiting the collectible cards business<br>Effect of change in accounting policy |
| Special credits or charges<br>• loss on disposal of property, plant, and equipment<br>• loss/gain on sale or write down of investment securities<br>• special severance payments and other restructuring costs<br>Special contributions for retirement pension plans |

*Note:* Bold print designates items that other sample companies argue no longer may be considered as extraordinary items.

revised guidelines, each of these ten report several extraordinary items and/or report items as extraordinary that fail to meet the IASC's strict definition. A list of extraordinary items reported by the ten companies is provided in Table 5 (Panel A). All ten provide the required IASC disclosures for extraordinary items. One of the ten states in its accounting policy footnotes that the company complies with IASs with two exceptions, one being IAS 8.[4]

Some companies specifically acknowledge the IASC's revised rules regarding extraordinary items. For one such company, a footnote states that extraordinary items are clearly distinct from the ordinary activities of the Group and are not expected to recur frequently or regularly. In its Five-Year Review, the company reports gains/losses on disposal of investments and restructuring costs for financial year 1994 and before as extraordinary income/expense. The company explains that the change in policy, whereby these items are no longer considered extraordinary, is due to the requirements of the revised IAS 8, effective January 1, 1995. In contrast, six of the ten companies listed in Table 5 report either gains/losses on the sale of investments or restructuring costs as extraordinary.

Another company states that it applies a strict interpretation of the concept of extraordinary income/expense. Gains/losses in the sale of businesses and fixed assets, as well as costs relating to restructuring, are considered to be a natural element of the Group's business and are therefore included as a part of the operating result, with a note of disclosure as to nature and amount. Again referring to Table 5, all ten companies report either gains/losses in the sale of businesses, gains/losses on the sale of fixed assets, or restructuring costs as extraordinary.

With the revision of IAS 8, IASC guidelines on extraordinary items are in some instances stricter than national requirements. Illustrative of this scenario, in its 1996 and 1995 financial statements prepared according to Finnish GAAP, one company reports discontinued operations as extraordinary items on the 1996 and 1995 profit/loss statements. In its 1995 profit/loss statement, the company also reports the cumulative effect of a change in accounting principle as an extraordinary item. However, the profit/loss account prepared according to IASs includes no extraordinary items. Such deviations between national guidelines and IASs can be confusing for users of financial statements and illustrate the need for harmonization of standards.

Several companies, while technically complying with the IASC's strict guidelines on extraordinary items, use other ways to distinguish "unusual" items and as such may not be complying with the "spirit" of IAS 8. For example, while one company does not report any extraordinary items in the income statement, in "Overview of Activities in 1996" (prior to the financial statements), it lists extraordinary items for 1996, 1995, and 1994. The "extraordinary items" include net gains on disposals and other non-recurrent income. Other companies list several types of "unusual" items in a separate category following profit from ordinary activities; a summary appears in Table 5 (Panel B).

In summary, our analysis reveals the following examples of noncompliance:

- Thirteen violate the all-inclusive requirement of IAS 8;
- Ten violate the IASC's strict guidelines on extraordinary items. The noncompliers included four of ten French, two of twelve Swiss, two of three Italian, the only Malaysian, and one of three Finnish companies.[5]

## IAS 9 Research and Development Costs (R&D)

### *Measurement*

Originally, IAS 9 required the expensing of research costs but allowed either the capitalization or expensing of defined development cost. Following the Comparability Project,

IAS 9 continues to require that research costs be expensed but now sets standards for capitalization of certain development costs. If the capitalization criteria are met, the costs must be capitalized and amortized. Otherwise, the costs must be expensed immediately.

R&D disclosures are likely not applicable for six companies (Table 4, Panel C) because the annual report includes no significant discussion of R&D activity. While R&D disclosures appear applicable for three other companies, none of the IASC required disclosures are provided. One of the three states that the application of IAS 9, which requires the capitalization of development costs meeting certain criteria, has been "postponed pursuant to authorization given by the French Stock Exchange Authorities in a letter dated May 19, 1995." Another includes an entire page in the annual report devoted to a discussion of R&D and states that 300 employees work in R&D. The final company provides a page of R&D discussion in the annual report with no financial statement disclosures. Thus, these three companies are not in compliance.

All 40 companies providing R&D disclosures expense research costs as required by the IASC. While eight companies capitalize at least some development costs, 32 expense all development costs. Some of the 32 are not in full compliance with IAS 8 which requires that (as opposed to allows) development costs be capitalized when incurred if certain conditions are met.

Four companies acknowledge that they do not comply with IAS 9 in regard to capitalization of certain development costs. Three companies state in their accounting policy footnote that they expense all development costs like other companies in the worldwide automotive industry. The audit report of the final company, which received a qualified opinion for 1996 and 1995, notes that the financial statements give a true and fair view in accordance with IASs with the exceptions described in the financial statements. The accounting policies footnote states that development costs at Group risk are not capitalized.

Most companies expensing all development costs provide vague R&D policy descriptions making it impossible to ascertain compliance or noncompliance. For example, one states that "R&D is not capitalized but is charged continuously to income" and another notes that "R&D are charged as an expense in the income statement in the period in which they are incurred without exception."

Companies whose development costs do not meet the capitalization criteria set forth in IAS 9 should consider disclosures similar to that provided by Bayer. In its footnote on R&D, Bayer states:

> According to IAS 9,...Research costs cannot be capitalized but must always be expensed in the periods in which they are incurred. Development costs, too, normally have to be recognized as expenses, but they have to be capitalized if it is sufficiently certain that the future economic benefits to the company will cover not only the usual production, selling and administrative costs but also the development costs themselves. There are also several other criteria relating to the development project and the product being developed, all of which have to be met according to IAS 9 if the development costs are to be recognized as an asset.
>
> The conditions for asset recognition are not satisfied in the Bayer Group, because the very nature and scale of the economic risk attaching to chemical and pharmaceutical products under development means it cannot be assessed reliably until:

- Development of a product or process has been completed
- In the case of chemical products, subsequent premarketing as a trial product has demonstrated that the product meets the technological and economic requirements of the market.

> An additional factor in the health care and agriculture areas, for example, is that marketing is impossible without regulatory approval, even if the product's efficacy is proven.

The above disclosure clearly informs the financial statement reader of the requirements of IAS 9 and provides assurance that Bayer is in compliance.

Disclosures provided by the eight companies capitalizing some development costs suggest compliance with IAS 9. For example, one states: "R&D costs are charged to the income statement insofar as the conditions for capitalization in accordance with IAS 9 are not fulfilled. In this connection, only the costs for the development of new products and the further development of existing products are included." Another states, "Research costs are charged to income when incurred. Development costs are expensed if they do not meet the capitalization criteria set out in international accounting principles."

In an interesting twist, one company's R&D disclosure indicates compliance with IAS 9; however, further investigation suggests noncompliance with IAS 8. The company's R&D footnote states, "in accordance with the provision of IAS 9, capitalized R&D are reviewed each year-end and any costs that no longer meet the criteria for capitalization are written off to the profit and loss account. Costs that continue to meet the criteria for capitalization are amortized over a period not exceeding five years, as from the dates on which the related products are marketed." An examination of the income statement reveals that this company wrote off capitalized R&D as an extraordinary item in 1994, 1995, and 1996. Thus, the company is not complying with the IASC's strict definition of an extraordinary item.

### *Disclosure*

Regarding disclosures, ten companies do not disclose their accounting policy for R&D and the amount of R&D charged to expense (See Table 4, Panel C). For the eight that capitalize some development costs, only two note that a test for impairment is conducted and discuss the write-back of previously written-off development costs. However, the latter is likely not applicable for most companies. Four of the eight disclose their amortization policy, and the disclosure is not applicable for two companies (i.e. there is no capitalized development costs on the books). Four disclose the useful life of capitalized development costs, and again, the disclosure is not applicable for two companies. Only one company provides the new IASC disclosure requiring a reconciliation of the balance of unamortized development costs at the beginning and end of the period. Again, the disclosure is not applicable for two companies.

While *WorldScope's* three-year comparative data suggest that three companies changed from expensing all R&D to a mix of expensing and capitalizing between 1994 and 1996, our analysis indicates two of these companies charged all R&D to expense in 1996. For the third, the annual report states that the 1996 accounts have been stated for the first time in full compliance with IASs, and R&D are normally charged directly

to income as incurred. Development costs for major projects are only capitalized and amortized over the period of use (maximum five years) to the extent that the anticipated yield will exceed the development costs with reasonable certainty. At the end of 1996, there are no capitalized development costs.

In summary, the analysis reveals some noncompliance:

- Three companies with significant R&D activity provide no R&D disclosures;
- Four acknowledge noncompliance in regard to capitalization of certain development costs;
- Several examples of noncompliance with disclosure requirements are revealed.

## IAS 16 Property, Plant, and Equipment (PPE)

### *Measurement After Initial Recognition*

Initially, IAS 16, as issued in 1982, permitted either historical cost or revalued amounts as the basis for reporting plant assets. As revised via the Comparability Project, the IAS 16 benchmark suggests that PPE be carried at cost less accumulated depreciation. The allowed alternative states that PPE may be carried after initial recognition at its revalued amount. As modified, IAS 16 requires that any revaluations be to fair value and that these be updated regularly (at least every three years).

Twenty-five companies (Table 4, Panel D) utilize historical cost exclusively. Of these, while stating in a footnote that PPE is stated at historical cost, one company, in another footnote providing a schedule of depreciation and amortization, discloses depreciation per IAS and then adjusts for depreciation on revalued assets to arrive at total depreciation per Finnish GAAP. Thus, per Finnish standards some items of PPE are revalued, but the company's IAS statements utilize historical cost only. Again, such differences between national GAAP and IASs may be confusing to financial statement users.

Another company states that PPE is carried at purchase or production costs. A schedule for PPE indicates that at the end of 1995 there was a balance for revaluations; however, the balance was zero at the end of 1996. Thus, it appears that the company switched to the IASC benchmark during 1996.

In addition to measuring some items of PPE using historical cost, 12 companies revalue certain items in association with company law or tax regulations. For example, one company states that PPE are "recorded at acquisition cost, except those within the scope of a legal revaluation." Another company states that PPE are carried, "at cost, except those items acquired by French companies which are stated at revalued cost, in accordance with the provisions of the laws of Dec. 29, 1976 and Dec. 30, 1977."

Twelve other companies utilize revalued amounts for specific groups of PPE and historical costs for all other items. For example, one company states "investment properties are valued from time to time by sworn appraisers. The basis of valuation is their open market value and any surplus arising on valuation is transferred to a non-distributable reserve." Another company states:

> ...land and buildings are stated at valuation. Independent valuations are performed every three years on an open market for existing use basis. In the intervening years, the Directors review the carrying value of land and buildings and adjustment is made where there has been a material change. Revaluation surpluses and deficits are dealt with in capital reserves except for movements on individual properties below depreciated cost which are dealt with in the profit and loss account. Other tangible fixed assets are stated at cost less amount provided for depreciation.

Of the companies revaluing certain assets, one acknowledges in a section on deviations from IASC Recommendations that it has made a revaluation to fixed assets in a manner not in accordance with IASs.

The IASC requires that revaluations be made with sufficient regularity and that revaluations are applied to the entire class of PPE. Revaluations associated with company law and tax regulations may make it difficult, if not impossible, to comply with these IASC requirements. For example, several French companies, or those with significant French subsidiaries, revalued assets only as required by law in the 1970s. A similar situation holds for certain Italian companies (i.e., the Italian monetary revaluation laws of 1991 in relation to property). For the 12 companies electing to revalue certain items of PPE, six indicate that valuations are made with sufficient regularity, and 11 indicate the specific classes of PPE revalued. It is impossible to determine if the remaining companies are complying with the IASC guidelines.

*WorldScope's* three-year comparative disclosures reveal that one company switched from historical cost with revaluations to historical cost in 1996. The annual report states that the change moved the company in compliance with IASs. *WorldScope's* comparative data also indicate that one company moved from historical cost to historical cost with revaluations in 1996, and another made a similar switch in 1995. Thus, following completion of the IASC Comparability Project, these two companies moved from the IASC preferred benchmark to the IASC allowed alternative.

### *Disclosures for Revalued PPE*

Of the 24 companies using the IASC allowed alternative, 15 companies disclose the carrying amount for each measurement basis. Of the nine companies not providing this disclosure, eight revalued assets only in association with company law or tax regulations. For the 12 companies utilizing the IASC allowed alternative (other than for revaluations associated with company law or tax regulations), Table 4 (Panel D) presents numerous examples of noncompliance with IASC required disclosures.

For companies following the allowed alternative only in association with company law or tax regulations, all 12 companies provide information regarding the basis used to revalue the assets (government indices) and whether an independent valuer was used. For five of the six French companies in this group the effective date is provided or can be inferred, given that the 1978 required government revaluation is general knowledge. The sixth French company reported revaluations based only on its Mexican subsidiaries. All the other French companies state that their financial statements are based exclusively on the historical cost principle. For example, one company specifically states that French and foreign legal revaluations are not reflected in the consolidated financial statements.

Overall, the disclosures provided by companies revaluing due to company law and tax regulations may be viewed as problematic. Lack of compliance for this group may be tied to conflicts between IASs and national requirements, and in some instances compliance may indeed not be possible. This issue requires further consideration by the appropriate parties.

### *Depreciation*

As required by IAS 16, all the companies charged depreciation expense on fixed assets on a systematic basis over the assets' useful lives. Table 4 (Panel D) lists the depreciation methods utilized by the 49 companies.

### *Disclosures*

As a result of the Comparability Project, IASC disclosure requirements for PPE were expanded considerably. Table 4 illustrates the degree of compliance and reveals few examples of noncompliance for disclosures other than those associated with revaluations (discussed separately). Noncompliance is noted primarily in three areas. Fifteen fail to provide a complete reconciliation of the carrying amount at the beginning and end of each period, and six do not disclose the useful lives or depreciation rates utilized.

While it appears that six should disclose information regarding the impairment test (i.e. whether in determining the recoverable amount of items of PPE expected future cash flows have been discounted to present value), none provide such disclosures. In 1996, one of these six includes amounts written off in its tangible asset reconciliation (for land and buildings and plant and machinery) and states that deficits on individual properties below depreciated cost had been charged to the consolidated profit/loss account. The other five also include a line for write-offs in their PPE reconciliation.

In summary, for PPE, noncompliance includes:

- One company made a revaluation to fixed assets in a manner not in accordance with IASs;
- Several examples of noncompliance with disclosures are noted.

Noncompliance with disclosures is particularly problematic for the 12 electing to revalue certain classes of assets.

## IAS 18 Revenue

IAS 18 Revised requires that companies disclose the accounting policy adopted for revenue recognition and if applicable the methods used to determine the stage of completion for services rendered.[6] Twenty-seven companies (Table 4, Panel E), representing the majority, are not in compliance with the IASC disclosure requirement regarding accounting policy used for revenue recognition.

## IAS 19 Retirement Benefit Costs

In the 1983 version of IAS 19, the guidance for defined benefit plans was very general and essentially only required that costs be rationally allocated to the periods benefited. The standard indicated either an accrued or a projected benefit valuation method should be used consistently for defined benefit plans. Following the Comparability Project, IAS 19 contained much more detail. However, the standard continued to permit flexibility by presenting the accrued benefit valuation method as the benchmark but also set forth a projected benefit valuation method as an allowed alternative.

Analysis suggests that many companies view IAS 19 as not applicable for their retirement plans or alternatively chose not to comply with the requirements. Thus, compliance is discussed separately for companies providing 1) limited disclosures (26 companies), and 2) a significant portion of the IASC required disclosures (23 companies).

### *Limited Pension Disclosures Group*

The companies providing limited disclosures include four of ten French, seven of eight Swedish, the only Malaysian, two of three Japanese, all three Finnish, all three Italian, both South African, and four of 12 Swiss companies. Of the 26, only two acknowledge that they do not comply with IAS 19. For example, one states that the company complies with the guidelines of the IASC with the exception of pensions which are reported per accounting practices in countries where the company has operations.

Disclosures for the limited disclosure group range from none to a few short statements or paragraphs including vague descriptions of the plans. For example, while one company's balance sheet includes a liability for pensions, no disclosures are provided. All three Finnish, three of the Swedish, and one Swiss company state that the pensions plans are contracted with insurance companies and provide very limited additional disclosure. Five Swedish companies and one Swiss company with significant plans based in Sweden, provide very limited disclosures for PRI (Pension Registration Institute) plans. For example, one simply discloses liabilities to the PRI and the calculated rate of interest for the PRI liability. Another only discloses the amount of PRI pensions and other commitments.

Although IAS 19 appears applicable for most, if not all, of the 26 companies, none disclose the actuarial present value of promised retirement benefits, the fair value of the plan assets, or the principal actuarial assumptions used in determining the cost of retirement benefits. Few disclose the actuarial valuation method used or discuss the actuarial assumptions used.

Although, some companies in our sample imply that IAS 19 is not applicable for their pension plans, a recent statement by the IASC indicates that several such companies are not complying with IAS 19. In announcing the recent revision of IAS 19, the IASC (1998b) states that some argued that the old IAS 19 (as revised during the Comparability Project) did not work well for plans in countries such as Germany, Japan, and the Netherlands. However, the IASC now holds that as these countries were represented on the Retirement Benefits Steering Committee, such arguments will have little force in the future. The significance of this statement is magnified by the revision of IAS 1. Paragraph 1 of IAS 1 now states that "financial statements should not be described as complying with IAS unless they

comply with each applicable Standard and each applicable Interpretation issued by the Standing Interpretations Committee."

#### *Significant Pension Disclosures Group*

The 23 other companies provide a significant portion of the IASC required disclosures for pensions. Table 4 (Panel F) provides a summary of compliance. For the ten companies with defined contribution plans, the table provides several examples of noncompliance.

Of the 23 with defined benefit plans, 11 amortize past service cost over the expected remaining working life of employees unless a shorter time period is more appropriate. Amortization of past service costs is either not disclosed or not applicable for the remaining companies. The IASC benchmark, accrued benefit, is the actuarial valuation method used by 12 of the companies. Two use the IASC allowed alternative, projected benefit method (which has since been eliminated with the 1998 revision of IAS 19). Twenty-one companies state that actuarial assumptions incorporate projected salary levels. Sixteen state that all assumptions (such as interest rates) are based on long term assumptions. For the above items, the remaining companies do not disclose their policies; thus it is not possible to determine whether or not they are complying with IAS 19.

#### *Disclosures*

For the IASC required disclosures associated with defined contribution plans, Table 4 indicates that compliance is problematic. For example, only nine (of 23) provide a general description of the plan and only 15 disclose the amount recognized as an expense during the period. While none of the companies provide information regarding terminations, curtailments, or settlements, this is likely because they are not applicable.

Noncompliance may be summarized as follows:

- Twenty six provide very limited disclosures
- For the 23 providing the majority of the IAS 19 information, compliance with disclosures is problematic

### IAS 21 The Effects of Changes in Foreign Exchange Rates

As issued in 1983, the initial version of IAS 21 allowed several choices. Only modest changes were made during the Comparability Project. For example, certain choices such as those relative to the deferral and amortization of exchange differences on long-term monetary items, on translation of income statements of foreign entities at the closing rate, and on translation of financial statements of foreign entities that report in the currency of a hyperinflationary economy without prior restatement were narrowed (Epstein and Mirza 1997). IAS 21 prescribes that the statements of self-sustaining operations be translated using the current rate method and statements of integrated operations be translated using the temporal method. The revision yielded additional disclosure requirements.

### *Foreign Currency Transactions*

The Comparability Project eliminated the option of deferring recognition of foreign exchange gains/losses on long-term monetary items. The IAS 21 benchmark now requires that on settlement of monetary items, or on reporting monetary items at rates different from those at which they were initially recorded, the entity recognize any income/expense during the period in which they arise.

Ten companies (Table 4, Panel G) utilize hedging to minimize exchange gains/loss arising from foreign currency transactions. Three of these note that those gains/losses not hedged are recognized per the IAS 21 benchmark.

Thirty-five companies use only the IASC benchmark. Alternatively, two Canadian companies note that unrealized exchange gains/losses on translation of long-term monetary items are deferred and amortized over the life of those items; thus, these companies are using a method eliminated by the Comparability Project. Section 1501 of the Canadian Handbook notes that this is an inconsistency with IAS GAAP. For two other sample companies gains/losses arising from foreign currency transactions are not applicable.

### *Foreign Enterprises*

For 46 companies, there is no indication that the company has subsidiaries operating as foreign enterprises (i.e. functional currency is reporting currency). The other three, as required by the IASC, use the temporal method to account for the translation of subsidiaries operating as foreign enterprises.

### *Foreign Entities*

Forty-five companies utilize the IASC benchmark, the current rate method, to account for the translation of foreign entities (i.e. functional currency is foreign currency). One company indicates that all its subsidiaries depend on the Parent for their product and supply and operate as integrated parts of the Parent; thus the company has no foreign entity subsidiaries.

Three are not in noncompliance with IAS 21. One, which acknowledges that it does not comply with IAS 21 in its accounting policy note, states that current receivables/payables denominated in foreign currencies are translated into the Parent currency at the exchange rates in effect at the respective balance sheet dates. Noncurrent monetary items denominated in foreign currencies are translated at historical exchange rates. Had noncurrent receivables/payables been translated at the exchange rates in effect at the balance sheet dates pursuant to IAS 21, the differences would not be significant. Another of the noncompliers uses the current-noncurrent method. The other translates balance sheet items at year end rates except for shareholders' equity items, which are translated at historical rates. Income/expense items are converted at average exchange rates for the year. Any resulting translation differences are posted to shareholder's equity.

### *Foreign Entities Operating in Hyperinflationary Economies*

For subsidiaries operating in a hyperinflationary economy, the original version of IAS 21 required that the financial statements be translated without prior restatement. Following the Comparability Project, the IASC now requires that the financial statements be restated via IAS 29, *Financial Reporting in Hyperinflationary Economies*, before translation.

Twenty companies discuss their policy for translating subsidiaries operating in highly inflationary countries. Five companies utilize the temporal method; five others use the current rate method or a modified version of this method. Three companies use the monetary/nonmonetary method or a modified version of this method. Only one company acknowledges noncompliance in its annual report. This company states in a section on exceptions to IAS:

> In a couple of instances, the monetary/non-monetary method has been applied in the translation of foreign subsidiaries in countries with high inflation. According to IAS recommendations, such translations are based on the application of an inflation index. In terms of the effect on earnings, the difference is considered marginal.

Only seven companies are in compliance with IAS 21. Of the seven, only two make specific reference to IAS 29. One company states, "those subsidiaries operating in high-inflation countries (cumulative inflation in excess of 100% in three years) are translated at year-end exchange rates in accordance with IAS No. 29. The effects of inflation on monetary assets are allocated among various income statement captions." The second company notes that Turkish undertakings followed IAS 29.

### *Disclosures*

Table 4 indicates few examples of noncompliance with IAS 21 disclosure requirements with one exception. Fifteen companies fail to disclose the amount of exchange differences included in net profit/loss for the period.

While most companies disclose the net exchange differences classified as equity as a separate component of equity, some of these may not be complying with the spirit of IAS 21. In several instances, the information is not supplied in a true reconciliation form and the balance sheet and footnotes must both be viewed to reconstruct the activity. The disclosure is not applicable for two companies. One of these uses only the temporal method. The other hedges shareholder's equity in non-domestic countries; thus, the Group's shareholders' equity is not impacted by the translation effect.

The IASC requires that when the reporting currency is different from the currency of the country of domicile the reason for using a different currency and the reason for any change in the reporting currency must be disclosed. All but two companies report in the local currency. A Canadian company discloses that the consolidated statements are expressed in US dollars, the principal currency of the company's business, thereby, satisfying the IASC disclosure requirement. However, a holding company based in Hong Kong, with its primary listing in London, reports in US dollars but does not provide a rationale for stating its financial statements in a currency different from the currency of the country of domicile.

Noncompliance with IAS 21 may be summarized as follows:

- Two Canadian companies defer and amortize unrealized exchange gains/losses on translation of long-term monetary items over the life of those items, thereby using a method eliminated by the Comparability Project;
- Two do not follow IASC guidelines for translating foreign entities;
- Thirteen of 20 with operations in hyperinflationary economies, do not restate these foreign entities in accordance with IAS 29;
- Several fail to provide all required disclosures.

## IAS 22 Business Combinations

The original version of IAS 22 was issued in 1983. As revised following the Comparability Project, IAS 22 now more clearly defines which combinations are accounted for using the purchase method and which must be accounted for as a pooling (Epstein and Mirza 1997). Purchase accounting must be used for acquisitions, and pooling may only be used for a uniting of interest. As expected given the IASC's strict position on pooling, none of the sample companies accounted for a business combination using the pooling method during 1996.[7]

As revised, IAS 22 prohibits the immediate write-off of goodwill against equity, which was previously allowed (Epstein and Mirza 1997). Goodwill must be recognized as an asset and amortized to income on a systematic basis over its useful life. IAS 22 requires the amortization period not to exceed five years, unless a longer period (not to exceed 20 years) can be justified. Recently, goodwill was revisited as part of the IASC's intangible assets project.

### *Purchase Method*

Thirty-one companies (Table 4, Panel H) report business combinations accounted for as purchases during 1996. For an additional company, the annual report states that the company had newly consolidated three companies. Disclosures for one of these subsidiaries indicate that ownership went from zero percent in 1995 to over 84 percent in 1996. Yet, the financial statements are silent regarding several IASC disclosures. Based on the schedule reconciling goodwill on acquisition, it is possible that the combinations are immaterial.

A few companies do not strictly adhere to the IASC's distinction of the terms acquisition/purchase and merger/pooling, thereby creating confusion. For example, one company discusses its treatment of goodwill (charged to reserves) arising from a 1996 business combination. However, "merger" is utilized elsewhere in the annual report to describe this same business combination.

### *Disclosures*

Overall, disclosures for business combinations reveal few examples of noncompliance (see Table 4). A notable exception is that 11 of 31 companies fail to clearly disclose the

cost of the acquisition. The cost cannot be determined by examining the footnotes or by consulting the cash flow statement.

### *Goodwill*

Forty-two companies state that goodwill is recognized as an asset and amortized over a straight-line basis. For those following the capitalize and amortize approach, four utilize an amortization period of five years or less. Thirty-three use an amortization period of more than five but equal to or less than 20 years. Of these 33, 22 provide some explanation of why the amortization period exceeds five years. However, 15 of the 22 simply state that goodwill is amortized based on the estimated useful life or that circumstances justify amortization over a period exceeding 20 years. Only seven comply with the "spirit" of the IASC disclosure requirement and provide a specific rationale for utilizing an amortization period in excess of five years. For example, one states that goodwill related to gas operations will be amortized over 20 years since it pertains to gas companies in stable markets and that other goodwill will be written off over five to ten years.

Five amortize goodwill over periods of up to 40 years. Four of the five acknowledge that they are in violation of IAS 22 in their accounting policy footnotes. Two of the four state that while awaiting clarification of the new IASC standard covering the amortization of intangible assets, they have postponed application of IAS 22. The two (French) companies further state that amortization of goodwill over a 40-year period is allowed by the Commission des Operations de Bourse. The audit opinion of one of the two also acknowledges this exception to compliance with IASs.

Only two of the five provide a justification for using an amortization period in excess of five years. One indicates that a 40-year amortization period provides the most accurate picture of the acquisition's impact on earnings and financial position and also notes that applying a longer amortization period may be attributed to competitive factors. The second argues that the 40-year amortization period reflects the subsidiary's future prospects at the time of acquisition.

Seven companies have no goodwill on the books. This omission may be due to non-compliance (i.e. goodwill is charged to reserves) or because it is not applicable. For two of these companies, there is no evidence to indicate noncompliance. For one company, this omission may be viewed as a violation of IASs in that business combinations accounted for as purchases occurred during the year.

Four of the seven companies with no goodwill on the books write off goodwill to reserves. One states in a footnote on subsidiary companies that goodwill is dealt with in capital reserves. Another states in the goodwill footnote that goodwill acquired was offset against consolidated reserves without any impact on the income statement in accordance with prevailing European practice. The company further notes that this treatment is in compliance with the directives of the European Union, but in contrast, IAS 22 requires acquired goodwill to be capitalized and written off via the income statement over a period of five to 20 years. The company's audit opinion states that the financial statements comply with the "IAS of the IASC" while the accounting policy note indicates that it complies with IASs with the exception of goodwill. Two companies state that goodwill is eliminated against retained surplus at the date of acquisition. In the note on accounting policies, one of these companies states that it complies with the standards of the IASC with the exception of goodwill.

The analysis provides evidence that seven companies changed their method of accounting for goodwill to come in line with the revised IAS. These companies changed from charging goodwill to reserves to the capitalize and amortize approach. One states:

> Goodwill on acquisitions occurring on or after 1st January 1995 is reported in the balance sheet as an intangible asset or included within associates or non-current liabilities, as appropriate....Goodwill on acquisitions which occurred prior to 1st January 1995 was taken directly to reserves.

Another company states that goodwill was charged against shareholder's equity in the years through 1993. Starting from 1994, as a consequence of Italian Decree no. 127/1991, positive differences arising on purchase are capitalized and amortized during the period that such goodwill is expected to benefit. *WorldScope's* three-year comparative data indicate that two additional companies changed to the capitalize and amortize approach between 1994 and 1996. These changes may be viewed as a response to the Comparability Project whereby the method of charging goodwill to reserves was eliminated.

One company notes a change in accounting method that involves amortizing goodwill over a maximum of 20 years, versus 40 years previously, effective from January 1, 1995. The company states that this method was adopted in compliance with the provisions of IAS 22 Revised. Another states that goodwill is capitalized in accordance with IAS 22 and is being written off over twenty years beginning in 1994, thereby suggesting the new policy is a response to the Revision of IAS 22.

### *Goodwill Disclosures*

Compliance with the IASC required disclosures for goodwill is mixed (see Table 4). On one extreme, a company includes no footnote on goodwill, and amortization is revealed only via a schedule reconciling the beginning and ending balance of goodwill. No other goodwill disclosures are provided by the company.

As noted previously, a key area of noncompliance is that 14 companies that amortize goodwill over a period exceeding five years fail to provide a justification for using a longer period. And, several others do not comply with the "spirit" of the IASC disclosure requirement. Also notable is that 13 companies fail to provide a reconciliation for goodwill at the beginning and end of the period.

In summary, areas of noncompliance with IAS 22 include:

- Four companies charge goodwill to reserves;
- Five amortize goodwill over a period in excess of the IASC 20 year limit;
- Some companies fail to provide all the IASC required disclosures for business combinations and goodwill.

## IAS 23 Borrowing Costs

The 1984 version of IAS 23 provided a flexible approach with capitalization or expensing of borrowing costs permitted. The Comparability Project proposed flexibility be reduced. E 39 favored capitalization of borrowing costs which met certain criteria; however, a last

minute change resulted in 1993's IAS 23 incorporating capitalization as an allowed alternative for borrowing costs that are directly attributable to the acquisition, construction, or production of a qualifying asset. Under the IAS 23 benchmark treatment, borrowing costs related to expenditures on assets that take a substantial period to get ready for their intended use are expensed. All other borrowing costs must be expensed.

In the sample, six companies follow the benchmark (Table 4, Panel I). All six specifically disclose their policy for borrowing costs thereby satisfying the only IASC required disclosure. One notes:

> French accounting principles exclude financial interest from capitalizable costs of constructing fixed assets. Under US GAAP, an appropriate portion of financial interest would be included in the capitalizable costs. The reconciling adjustment includes the amortization of previously capitalized interest.

This company also provides a reconciliation of shareholder's equity and the statement of income under French GAAP and US GAAP. This scenario illustrates the consequences associated with differences between IASs, other "internationally recognized standards," and/or national GAAP, particularly the confusion users may face when presented with two versions of GAAP for one company.

In an interesting twist, a company expensing borrowing costs states in "Important Deviations From IASC Recommendations:"

> The acquisition value of machinery and buildings does not include interest expense paid during construction and assembly time. According to the IASC, such interest expense should be included in acquisition value.

Thus, this company is confessing to a deviation from IASs, when it appears to be following the IASC benchmark.

Fourteen companies follow the IASC allowed alternative. As required, all 14 disclose their accounting policy for borrowing costs. However, only six disclose the amount of borrowing costs capitalized. None disclose the capitalization rate used to determine the amount of borrowing costs eligible for capitalization.

In that 29 companies made no mention of borrowing costs, the issue is likely not applicable for most of these. However, some may not be complying with the IASC required disclosures in that a few of these mention significant construction projects in their annual reports.

In summary, given the flexibility permitted by IAS 23 most companies appear to be complying with the recognition guidelines. The preference for the allowed alternative treatment may be linked to its consistency with US GAAP. Indeed one company using the benchmark is doing so only because of French national requirements and indicates a preference for the allowed alternative in order to be in line with US GAAP. With regard to disclosures, there are several examples of noncompliance among those using the allowed alternative method.

## SUMMARY

The research questions addressed in this article concern the extent to which companies claiming to comply with IASs are doing so in practice and the nature and significance of

measurement and disclosure noncompliance. Our study of the reporting practices of 49 major companies from 12 countries in 1996 reveals that there is significant noncompliance with IASs. Only 20 (41%) of the 49 companies surveyed note compliance with all IASs. More importantly, even where compliance with all or most IASs is indicated in the accounting policy footnote and/or audit opinion, there are notable examples of noncompliance with the measurement and disclosure requirements of individual IASs in practice.

The main areas of noncompliance in respect of IAS 2, *Inventory*, are the use by some companies (4%) of inventory valuations not endorsed by the standard, the use of LCM (29%) rather than LCNRV and a lack of disclosure of the methods used. For IAS 8, *Net Profit or Loss for the Period*, many companies (27%) violate the all inclusive requirement and the IASC's strict guidelines on extraordinary items (20%). In the case of IAS 9, *Research and Development Costs*, some companies with significant R&D activity do not make any disclosures. In addition, several companies (8%) acknowledge their noncompliance in regard to capitalization of development costs. Noncompliance in respect of disclosures is also notable for IAS 16, *Property, Plant and Equipment*, and especially problematic for those companies (24%) making revaluations. The majority of companies (55%) are not in compliance with the disclosure requirements of IAS 18, *Revenue*. In respect of IAS 19, *Retirement Benefit Costs*, disclosure by the majority of companies (53%) is very limited. For IAS 21, *The Effects of Changes in Foreign Exchange Rates*, some companies use methods eliminated by the standard while a significant number of companies (65%) with operations in hyperinflationary economies do not restate these foreign entities in accordance with IAS 29. Failure to provide the required disclosures is also evident for IAS 22, *Business Combinations*. In addition, some companies (9%) still charge goodwill to reserves despite the elimination of this practice by IAS 22. Further, a number of companies (11%) amortize goodwill over a period in excess of the IASC 20 year limit, though this is no longer an issue following the 1998 revision of IAS 22. Disclosure is again an issue for some companies in the case of IAS 23, *Borrowing Costs*.

## CONCLUSIONS

Overall, the degree of compliance by companies claiming to comply with IASs is very mixed and somewhat selective. Important areas of noncompliance with the measurement and disclosure requirements of IASs have been highlighted. The extent of noncompliance discovered by our research supports IFAC's view that auditors are asserting that financial statements comply with IASs when the accounting policies footnotes and other notes show otherwise. The research reinforces the significance of the acceptance and observance issue for the IASC. It also suggests that while many companies may appear anxious to seek the international investment status that comes with the adoption of IASs they are not always willing to fulfil all of the requirements and obligations involved.

Our research suggests that national standard-setters and regulators need to work more closely with the IASC to eliminate significant differences between national accounting guidelines and IASs. For example, one sample company includes both Finnish and IASC statements in its annual report. A comparison of the two sets of statements reveals several significant differences including the disclosure of profit/loss and the revaluation of fixed assets.

A similar situation arises when companies, including several in our sample, provide reconciliations to US GAAP. Reporting two (or more) sets of numbers for net income, stockholder's equity, and so on, may be confusing to financial statement users. Attainment of an IOSCO endorsement of IASs would eliminate the need for reconcilations to US GAAP.

Our research suggests that, in addition to working with IOSCO, the IASC needs to encourage national regulators to support IASs without exception, particularly as more and more countries allow for the use of IASs. For example, a French company in our sample states that the application of IAS 9 (R&D) has been postponed pursuant to authorization given by the French Stock Exchange Authorities. Differences between IASC requirements and national guidelines will be even more troublesome under IAS 1 Revised (effective for periods beginning on or after July 1, 1998). In 1999 financial statements, legislated conflicts with IASC GAAP will prohibit companies from noting compliance with IASs.

Additional research is needed to explore the impact of IAS 1 on the "selective compliance" identified by our research. When combined with the revision of (i.e. pensions revised 1998 and segment reporting revised 1997) and addition of (i.e. provisions and contingencies 1998 and recognition of financial instruments forthcoming) several IASs, IAS 1 Revised may force some, if not many, companies to reconsider adoption of IASs.

## NOTES

1. Several companies followed IASs except for goodwill or research and development. These companies were retained in the final sample.
2. Only 32 of the sample companies were included in the Lexis-Nexus version of *WorldScope* database.
3. This involved addressing a series of questions such as:

   - If the company reported a business combination as a purchase during 1996 are the disclosure requirements for purchases marked as either "yes" or "no;" alternatively, if there were no purchases during 1996, are the disclosures required marked "not applicable"?
   - Are the IASC disclosure requirements for revalued property, plant, and equipment marked as "yes" or "no" when the company revalues certain assets, and alternatively marked as "not applicable" if the company uses only historical cost to value property, plant, and equipment?

4. The company appears to be in compliance with IAS 8's all inclusive requirement. Thus, the violation referred to in the accounting policy footnote is likely associated with the reporting of extraordinary items.
5. In that only six companies appropriately reported changes in accounting principle and given the diverse nature of the items reported, few, if any, meaningful generalizations can be made. Thus, no discussion is included.
6. Measurement issues are not discussed given the diversity of revenue sources for the sample. The major change associated with the Comparability Project in relation to revenue recognition is that while the original version of IAS 18 permitted either percentage-of-completion or completed contract accounting for the recognition of revenue related to rendering of services, as revised, IAS 9 now endorses only the percentage-of-completion method.
7. A few companies indicate, outside the financial statements, that members of the group merged or that subsidiaries merged with other entities. There is no discussion of the pooling method in the financial statements.

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# A Comparative Analysis of Management Accounting Practices in Australia and Japan: An Empirical Investigation

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**Key Words:** Japanese management accounting, Cost management, Australian costing practices.

***Abstract:*** *This paper is based on the findings of a questionnaire survey conducted on large manufacturing firms in Australia and Japan during 1997. The results of the survey have revealed a number of important differences between the two countries. For example, while management accounting practices of the Australian companies place an emphasis on cost control tools at the manufacturing stage, those of the Japanese companies devote a much greater attention to cost planning and cost reduction tools at the product design stage. Further, the Japanese companies seem to have introduced more frequent changes to management accounting practices than their Australian counterparts.*

There has been strong criticism in the recent past that accountants in Western countries, particularly in the U.S., have not been able to adapt their management accounting practices to changing technology and methods of production in manufacturing enterprises operating in highly competitive environments (Dilts & Russell, 1985; Brimson, 1986; Johnson & Kaplan, 1987; Lee, 1987). By contrast, several writers have hailed the Japanese management accounting practices as a major contributor to Japan's success in achieving a dominant position in the global competitiveness (Howell, 1989; Morgan & Weerakoon, 1989; Hiromoto, 1988; Kharbanda & Stallworthy, 1991). However, most of these criticisms and claims tend to be supported by anecdotal, rather than systematic, evidence (Shields, et al. 1991). In particular, studies based on empirical investigations aimed at verifying the validity of such criticisms and claims or examining whether Japanese management accounting practices differ from those of other countries are extremely sparse. The latest comparative study reported in the literature is a survey conducted in 1988 on management accounting practices in Japan and Scotland (Yoshikawa et al, 1989). Since then, however, several

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important changes may have occurred in the manufacturing environment and accounting practices of many countries. Furthermore, some of the studies done in Japan have been reported only in the Japanese language. Therefore, there is certainly a need for more systematic comparative studies covering various aspects of management accounting practices in different countries. Findings of such studies, while being useful to academicians in their teaching and research, can provide helpful insights to manufacturers on their relative strengths and weaknesses. Therefore, based on the results of a comparative survey of large manufacturing companies, this paper attempts to present an analysis of some latest empirical evidence on several important aspects of management accounting practices in Australia and Japan.

The survey was conducted in Japan and Australia during 1997. Although the questionnaire used for our survey comprised 31 questions on various aspects of management accounting practices this paper concentrates mainly on areas where a difference was apparent between the Japanese and Australian data. Since Australia represents a Western-type economy an analysis of this sort involves comparison of practices which have evolved within very different cultural contexts. It has been observed by several writers that accounting practices of Japanese organizations are heavily influenced by their unique cultural attributes and the different nature of their management accountants (Takemura & Takamatsu, 1987; Taketera & Yamamoto, 1989; Hudack, 1989; Wijewardena & Cooray, 1995). As such, in order to appreciate the significance of management accounting differences between Australia and Japan, it is important to overview some of the unique features of the Japanese cultural and business environment and their management accountants before examining the survey results. These features are outlined in the next section.

## JAPANESE CULTURAL AND BUSINESS ENVIRONMENT

One of the critical features of Japanese organizations is their collective decision-making (*ringi*), which is in direct contrast with individualism of the Western society (Drucker, 1971). Japanese managers debate a proposed decision throughout the organization until there is agreement on it and only then do they make the final decision. Similarly, the responsibility for a decision does not fall directly upon one individual manager. In accordance with the concept of *ringi*, the responsibility for a decision falls on all members of the group (Van Zandt, 1970).

Another very important management strategy which is clearly stated and carried through in Japanese companies is the unique company philosophy. Understanding and supporting the philosophy brings each individual employee closer to the organization and co-employees with shared objectives. This philosophy usually describes the firm as a family, distinct from any other firm, and makes each employee committed to the organization. Accordingly, all employees are identified with their company rather than the profession. For example, if you ask a Japanese cost accountant what his job is, it is quite common to hear from him that he works for a particular company without even mentioning that he is a cost accountant. Japanese cost accountants (like other employees) consider themselves first and foremost company employees rather than functional specialists (Yoshikawa, et al, 1989).

In Japan, many small firms operate as sub-contractors of large firms. Under such a contractual agreement, although the large firm may not hold any shares in the small firm, the

latter firm may actually operate much the same way as a subsidiary. As a result of this relationship, very close co-operation is evident between many manufacturers and their suppliers (Sasaki, 1981). Japanese manufacturing enterprises have benefited immensely from this co-operation. For example, the successful operation of their Just-In-Time inventory system is a result of this close co-operation.

Another factor that has had significant impact on Japanese management accounting practices is the very different nature of their management accountants. In Japanese organizations, management accountants are usually known as 'cost accountants'. Particularly in large enterprises, cost accountants are produced primarily through extensive in-house education and training programs. This firm-specific education and training provided in many Japanese companies is characterized by a unique system of imparting a basic knowledge of cost accounting to all employees in the organization, in addition to providing the accounting staff with a much more comprehensive and advanced program of training (Takemura & Takamasu, 1987). Generally, to become a cost accountant in a Japanese company, the normal route would be via a university degree. However, this may be in any discipline and it is unlikely to be an accounting degree. According to a survey conducted in 1987 by Hiramatsu (1992), 69.4 percent of companies in the sample indicated that there was no relationship between accountants and their university majors. After graduation, employment would commence with two or three years spent in each of various functional areas such as production, marketing, purchasing and accounting. Many Japanese managers have, therefore, worked for two or three years in the accounting division. After perhaps ten years with the company, specialization in cost accounting might commence (Yoshikawa et al, 1989).

By contrast, in Australia all persons aspiring to become accountants pursue a tertiary education program consisting of courses which are quite similar in structure, content and method of instruction, whereas their Japanese counterparts follow programs of training which vary significantly in all the above aspects, depending on the needs of individual employers. Thus, education provided to potential accountants in Australia is more or less general while it is firm-specific in Japan (Wijewardena & Cooray, 1995). This firm-specific nature of Japanese accounting education is a result of their life-time employment policy and the practice that companies requiring accountants recruit young graduates from universities and train them internally with the objective of meeting the skilled needs of an entity and only that entity (Cooke, 1994). Thus, the Japanese management accountant has a very different background to that of his Australian counterpart.

## QUESTIONNAIRE SURVEY

The questionnaire initially prepared for the survey was pilot tested on a small group of company accountants in each country before it was finalized on the basis of their responses. The final questionnaire was mailed to the 1000 largest manufacturing companies in each country. The size of companies was based on their total assets. The addresses of these companies were taken from the 1995 Japan Company Handbook and the Dun & Bradstreet (Australia) Database (1996). Since the names of individuals were not available the questionnaire was addressed commonly to the head of the accounting division in each company. Both the questionnaire and the letter of request used in Japan were presented in the Japanese language. The survey was completed during the first half of 1997 in Japan and

**Table 1.** Profile of the Sample Firm

| | Firms % | | | Firms % | |
|---|---|---|---|---|---|
| *Type of industry* | *Australia* | *Japan* | *Total assets US$ million* | *Australia* | *Japan* |
| Food and beverages | 20 | 4 | Below 10 | 20 | 0 |
| Fabricated metal products | 17 | 6 | 11-50 | 47 | 0 |
| Textile | 6 | 3 | 51-100 | 11 | 1 |
| Chemical products | 14 | 24 | 101-500 | 17 | 39 |
| Machinery and computers | 3 | 16 | 501-1,000 | 2 | 21 |
| Electronic and electric equipment | 6 | 15 | 1,001-5,000 | 3 | 31 |
| Transportation equipment | 4 | 12 | 5,001-10,000 | 0 | 4 |
| Furniture and fixtures | 6 | 1 | 10,001-20,000 | 0 | 3 |
| Miscellaneous | 24 | 19 | Above 20,000 | 0 | 1 |
| | *Firms %* | | | *Firms %* | |
| *Nature of market competition* | *Australia* | *Japan* | *Export Sales Ratio* | *Australia* | *Japan* |
| Slight competition | 3 | 0 | 0 | 31 | 25 |
| Moderate competition | 14 | 9 | 1-25 | 51 | 60 |
| Strong competition | 63 | 27 | 26-50 | 12 | 12 |
| Severe competition | 19 | 64 | 51-100 | 6 | 3 |
| | *Firms %* | | | *Firms %* | |
| *Number of employees* | *Australia* | *Japan* | *Annual Sales US$ million* | *Australia* | *Japan* |
| Up to 250 | 42 | 2 | 1-50 | 56 | 2 |
| 251-500 | 30 | 10 | 51-100 | 16 | 2 |
| 501-1,000 | 16 | 27 | 101-500 | 22 | 45 |
| 1,001-5,000 | 9 | 50 | 501-1,000 | 3 | 18 |
| 5,001-10,000 | 1 | 8 | 1,001-5,000 | 3 | 29 |
| 10,001-20,000 | 1 | 4 | 5,001-10,000 | 0 | 3 |
| Above 20,000 | 1 | 1 | Above 10,000 | 0 | 1 |

Respondents: 231 Australian companies and 217 Japanese companies

*Source:* Survey data (1997).

the latter half of 1997 in Australia. Response rates were quite similar, with 217 usable responses from Japanese companies (21.7%) and 231 usable responses from Australian companies (23.1%). A profile of the sample companies is displayed in Table 1.

Table 1 shows that 52 percent of companies in the Australian sample were in the industry groups of food and beverages, fabricated metal products and chemical products as opposed to 65 percent of the Japanese companies were in the chemical products, machinery and computers, electronic and electric equipment, and transportation equipment groups. When the sample companies were classified by firm-size according to total assets, 95 percent of Australian companies were within the asset structure ranging from 10 to 500 million dollars whereas 91 percent of Japanese companies had assets ranging from 100 to 5,000 million dollars. As indicated by the respondents of our survey, all sample companies in both countries faced some degree of competition, with 82 percent of Australian companies and 90 percent of Japanese companies having strong to severe competition. This shows that the respondents at the Japanese companies reported that they faced a greater degree of competition than their Australian coun-

**Table 2.** Importance of Management Accounting Tools

| | *Australia* | | | *Japan* | | |
|---|---|---|---|---|---|---|
| | *Mean* | *CV* | *Rank* | *Mean* | *CV* | *Rank* |
| Budgets | 4.22 | 0.197 | 1 | 4.13 | 0.229 | 3 |
| Historical accounting statements | 3.29 | 0.294 | 2 | 3.82 | 0.246 | 6** |
| Standard costing | 3.81 | 0.303 | 3 | 4.06 | 0.264 | 9* |
| Activity based costing | 3.59 | 0.347 | 4 | 3.05 | 0.330 | 11** |
| Cost-volume-profit analysis | 3.44 | 0.350 | 5 | 4.05 | 0.228 | 2** |
| Ratio anlaysis | 2.98 | 0.362 | 6 | 3.48 | 0.257 | 8** |
| Responsibility accounting | 3.24 | 0.368 | 7 | 3.82 | 0.236 | 4** |
| Variable costing | 3.22 | 0.391 | 8 | 4.03 | 0.245 | 5** |
| Quality cost reports | 3.05 | 0.400 | 9 | 3.57 | 0.255 | 7** |
| Target costing | 2.49 | 0.535 | 10 | 4.23 | 0.213 | 1** |
| Transfer pricing | 2.47 | 0.537 | 11 | 3.30 | 0.313 | 10** |

Responses: 225 in Australia and 209 in Japan

*Notes:* * Significant at 0.05;
** Significant at 0.01.

terparts. Sixty nine percent of the Australian companies and 75 percent of the Japanese companies participated in export trade. However, the export contribution of about three-fourth of these companies in both countries was within the range of 1 to 25 percent of their total sales. Only 28 percent of Australian companies in the sample had more than 500 employees. By contrast, 90 percent of Japanese companies had employees exceeding 500, with 63 percent exceeding 1,000 employees. When the firm size was measured in terms of annual sales, 94 percent of Australian companies had sales ranging from 1 to 500 million dollars against 96 percent of Japanese companies with sales over 100 million dollars. Forty five percent of Japanese firms had an annual sales turnover exceeding 1,000 million dollars. Overall, in terms of total assets, employment and annual sales, the Japanese firms were much larger than the Australian firms.

## RESULTS AND DISCUSSION

In four questions used for this study, a five-point Likert scale ranging from "much less important" to "much more important" was utilized for obtaining the respondents' views on the importance of various areas of management accounting. The responses to these questions were ranked in accordance with the coefficient of variation (CV). The Kruskal-Wallis non-parametric analysis of variances was used to examine the statistical significance of differences between Australian and Japanese responses to these questions. The other questions were intended to obtain factual information on the respondents' companies and their management accounting practices. The answers to such questions were analyzed in terms of percentages. Since some respondents failed to answer all questions, the percentages and averages used in the results were based on the total number of firms having responded to each question. The summarized results are given in Tables 2–16. The number of responses to each question is also shown in the tables.

The remainder of this section presents a comparative analysis of the results under several key areas covered in the survey, with emphasis placed on differences in Australian and Japanese practices.

## Management Accounting Tools

Some writers seem to hold the view that in the process of cost management Western manufacturing enterprises place heavy emphasis on cost control tools such as standard costing and variance analysis at the manufacturing stage whereas Japanese manufacturers devote greater attention to cost planning and cost reduction tools such as target costing and value engineering at the product design stage (Berliner & Brimson, 1988; Howell, 1989; Yoshikawa, et al, 1989). However, empirical evidence to support this view is limited. In order to gain some insights into one important aspect of this view, we asked the respondents to indicate on a five-point Likert scale the degree of importance they attached to a set of major management accounting tools in planning and controlling product costs in their organizations. The results based on their responses are presented in Table 2.

In the case of budgets, however, there is no statistically significant difference between the two sets of responses. This means that budgets are considered to be an equally important management accounting tool for planning and controlling product costs in both countries. The difference in responses on the use of standard costing is statistically significant at 5 percent while the differences in responses in respect of all the other management accounting tools included in the table are statistically significant at the 1 percent level. The ranking of importance indicates that the Australian companies placed heavier emphasis on budgets, historical accounting statements and standard costing while Japanese companies concentrated more heavily on target costing, cost-volume-profit analysis and budgets. The emphasis of Australian companies on the above three management accounting tools suggests that they pay greater attention to tools that are primarily used for planning and controlling costs and preparing financial statements. By contrast, the emphasis of Japanese companies particularly on target costing indicates that they pay greater attention to cost reduction at the planning and design stage of a new product. This supports the observation of Howell and Sakurai (1992) that "Japanese companies seem to understand better than their Western counterparts that costs should be managed and avoided during the product planning and development cycle rather than after products have entered full scale production." The technique of target costing is commonly referred to as *genka kikaku* in Japanese. This technique has been defined as a product costing system based on market-driven target costs. The target cost of a new product is estimated on the basis of a long-range profit plan and market price estimates. Usually, target costs are established somewhere between standard costs and allowable costs, which are determined by subtracting a target profit margin from the target price. Target price is the price that would provide the company with a competitive edge in the market (Martin et al, 1992). Since target costs are continuously reduced both during and after the design stage to promote continuous improvement this approach helps Japanese manufactures in maintaining a high level of competitiveness (Sakurai, 1989). Target costing is a collective effort of a team consisting of several persons such as product designers, engineers, cost accountants and suppli-

**Table 3.** Uses of Cost Accounting Data

| | *Australia* | | | *Japan* | | |
|---|---|---|---|---|---|---|
| | *Mean* | *CV* | *Rank* | *Mean* | *CV* | *Rank* |
| Decision Making | 4.00 | 0.201 | 1 | 4.00 | 0.200 | 4 |
| Budgeting and budgetary control | 4.12 | 0.223 | 2 | 4.40 | 0.186 | 3* |
| Cost management | 4.04 | 0.224 | 3 | 4.46 | 0.147 | 1** |
| Producer pricing | 4.04 | 0.251 | 4 | 4.26 | 0.180 | 2* |
| Preparation of financial statements | 3.80 | 0.301 | 5 | 4.27 | 0.244 | 5** |
| Performance evaluation | 2.73 | 0.379 | 6 | 3.14 | 0.282 | 6** |

Responses: 227 in Australia and 212 in Japan

*Notes:* * Significant at 0.05;
** Significant at 0.01.

ers. The Japanese collective decision making philosophy is well reflected in this team work (Nishimura, 1995). According to a survey by Sakurai (1988), 80 percent of the Japanese companies surveyed in 1987 adopted target costing. It has been often suggested by several writers that target costing is the major management accounting tool that Japanese companies have used for competing with powerful international competitors (Worthy, 1991). On the other hand, the above result supports the view that Australian accounting places greater emphasis on financial accounting which is based on external reporting while Japanese accounting devotes greater attention to cost and management accounting (Wijewardena & Cooray, 1995).

Another noteworthy difference between management accounting practices of these two countries lies in the importance attached to activity based costing (ABC). While the Australian companies gave the fourth highest ranking to this tool in our survey, the Japanese companies ranked it as the least important tool. This result is consistent with the view that although ABC is increasingly popular among Western companies it is rarely used in Japan (Scapens, 1991). The reasons for the low popularity of ABC in Japan are said to be several. One of the principal reasons seems to be that Japanese companies are interested in charging overhead costs directly to product lines rather than using the sophisticated overhead allocation criterion of ABC because they prefer simple methods (Ito, 1993; Kobayashi, 1993).

## Use of Cost Accounting Data

The respondents of our survey were also asked to indicate their views on the use of cost accounting data for a series of managerial activities. The responses are summarized in Table 3. There is no statistically significant difference in responses of both groups with regard to the use of cost accounting data for decision making purposes. The differences in responses on the use of cost accounting data for budgeting and budgetary control and product pricing are statistically significant at the 5 percent level whereas they differ significantly at the 1 percent level in respect of cost management, preparation of financial statements and performance evaluation. When taken together, cost management and product pricing were ranked by Japanese companies as the most

**Table 4.** Purposes of Standard Costing

| | *Australia* | | | *Japan* | | |
|---|---|---|---|---|---|---|
| | *Mean* | *CV* | *Rank* | *Mean* | *CV* | *Rank* |
| Product costing | 3.92 | 0.332 | 1 | 4.11 | 0.249 | 4 |
| Budgeting | 3.70 | 0.340 | 2 | 3.91 | 0.232 | 1 |
| Inventory valuation | 3.85 | 0.345 | 3 | 3.63 | 0.298 | 6** |
| Management control | 3.37 | 0.366 | 4 | 3.82 | 0.254 | 3** |
| Cost control | 3.44 | 0.373 | 5 | 4.04 | 0.242 | 2** |
| Cost reduction | 3.22 | 0.395 | 6 | 3.98 | 0.253 | 5** |
| Simplification of book keeping | 3.89 | 0.458 | 7 | 3.31 | 0.317 | 7** |

Responses: 214 in Australia and 193 in Japan

*Note:* ** Significant at 0.01.

important uses of cost accounting data against a similar ranking of decision making, budgeting and budgetary control by Australian companies. This result supports the view that Japanese companies devote greater attention to cost management and product pricing as a strategy for gaining a competitive advantage in the international market place (Sakurai, 1991). Both groups of responses, however, have similar ranking of importance on the use of cost accounting data for financial statement preparation and performance evaluation purposes.

## Standard Costing

It has been reported in the accounting literature that the importance of standard costing has declined significantly in recent years as a result of the changes occurred in the manufacturing environment (Lessner, 1989; Cheatham, 1990; Drury, 1992). To be able to shed some light on this assertion, we asked the Australian and Japanese manufacturers to indicate the degrees of importance they would attach to a series of possible purposes of standard costing. The results depicted in Table 4 show that there is no statistically significant difference in responses in respect of product costing and budgeting. However, significant differences exist on all the other purposes listed in the table. In essence, for Australian companies the most important purpose of standard costing was product costing, which was, however, given a lower ranking by the Japanese companies. Because of the heavy emphasis placed by Japanese companies on target costing it would be realistic that they gave standard costing a lower ranking. Even though the generally held view in Western countries is that standard costing is used primarily for cost management purposes the Australian respondents in our survey assigned a lower ranking to this function because they considered standard costing to be more useful for the first four functions listed in the table. In the case of Japanese responses, however, the ranking given for cost reduction is considerably lower than that for cost control. The reason for the low ranking of cost reduction could be their more extensive use of target costing than standard costing for cost reduction. The reason for their high ranking of cost control may be that even though target costing is used extensively for cost

**Table 5.** Investment Appraisal Methods

| | Australia | | | Japan | | |
|---|---|---|---|---|---|---|
| | *Mean* | *CV* | *Rank* | *Mean* | *CV* | *Rank* |
| Payback | 3.81 | 0.298 | 1 | 3.93 | 0.219 | 2 |
| Net present value | 3.37 | 0.405 | 2 | 3.32 | 0.310 | 4 |
| Internal rate of return | 3.27 | 0.419 | 3 | 3.44 | 0.292 | 3 |
| Accounting rate of return | 2.53 | 0.505 | 4 | 3.97 | 0.218 | 1** |

Responses: 223 in Australia and 207 in Japan

*Note:* ** Significant at 0.01.

reduction at the pre-production stage, they may be using standard costing for cost control at the production stage.

## Investment Appraisal

A previous study reported that when compared with their Western counterparts Japanese manufacturers made little use of discounted cash flow (DCF) approaches when making investment appraisals (Yoshikawa, et al. 1989). For the purpose of getting further empirical evidence on this aspect, we asked the two groups of respondents to indicate the degree of importance they would attach to each of the investment appraisal methods listed in our questionnaire. The responses received are summarized in Table 5. The difference in responses is statistically significant at the 1 percent level only in respect of accounting rate of return, which is ranked most highly by the Japanese respondents as against its lowest ranking by the Australian respondents. In contrast, net present value which is one of the major DCF approaches used in Western countries has received the lowest ranking from the Japanese respondents as against the second highest ranking received from the Australian respondents. However, it is interesting to see that the payback method has received the highest ranking from Australian firms with the second highest ranking from the Japanese. In essence, our findings reveal that Japanese manufacturers report the use of more non-DCF approaches than their Australian counterparts in appraising capital expenditure projects. According to Sakurai (1991), one possible reason for the less popularity of DCF approaches in Japan may be that they are more individualistic in nature and conflict with collectivism, which is a salient feature of Japanese organizations.

## Use of Budgets

The survey questionnaire carried two separate questions for obtaining factual information from respondents with regard to the types of budgets prepared and the frequency of their preparation. The responses to these two questions are presented in the form of percentages in Tables 6 and 7. Accordingly, the balance sheet and the capital expenditure budget are the only budgets on which considerable differences between the two countries were apparent. These two budgets were seen to be less popular in Japan. Annually prepared budgets are the most popular in Australia as opposed to biannually prepared budgets in Japan.

**Table 6.** Components of Budgets

| | Australia % | Japan % |
|---|---|---|
| Profit and loss statement | 100 | 100 |
| Balance sheet | 97 | 79 |
| Operating budgets | 98 | 99 |
| Cash budget | 99 | 94 |
| Capital expenditure budget | 99 | 79 |

Responses: 225 in Australia and 209 in Japan

**Table 7.** Timing of Budgets

| | Australia % | | | | | | Japan % | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *P & L* | *BS* | *OB* | *CB* | *CEB* | *Overall* | *P & L* | *BS* | *OB* | *CB* | *CEB* | *Overall* |
| Monthly | 46 | 33 | 48 | 50 | 29 | 41 | 43 | 14 | 53 | 43 | 10 | 33 |
| Quarterly | 14 | 13 | 15 | 15 | 14 | 14 | 6 | 3 | 10 | 5 | 4 | 6 |
| Bi-annually | 8 | 7 | 4 | 4 | 5 | 6 | 51 | 47 | 41 | 44 | 40 | 45 |
| Annually | 63 | 65 | 57 | 58 | 70 | 63 | 24 | 27 | 22 | 17 | 27 | 23 |
| Beyond one year | 17 | 14 | 14 | 12 | 18 | 15 | 5 | 3 | 5 | 3 | 5 | 4 |

Response: 228 in Australia and 211 in Japan

*Notes:* P & L = Profit and loss statement, BS = Balance sheet; OB = Operating budgets; CB = Cash budget; CEB = Capital expenditure budget; Overall = All budgets on average.

Surprisingly, despite the long-term view typically associated with Japanese management, our survey revealed that only 4 percent of the Japanese companies prepared budgets beyond one year. However, this did not suggest that Japanese companies were not engaged in long-term planning. In fact, when we asked the respondents, through another question, to indicate whether they prepared long-range plans 95 percent of the Japanese companies answered positively. The corresponding rate for the Australian companies in this respect was 83 percent.

## Overhead Allocation

As pointed out by Kaplan (1985), the traditional cost accounting systems were developed in the early part of the twentieth century for a very different type of production environment compared to what we see today. Those systems were designed to closely monitor direct labor cost for mass production of a few standard items because direct labor cost was a significant portion of total product costs. Manufacturing overhead costs, under those systems, were allocated to products primarily on the basis of direct labor costs. As a result of automation, however, direct labor content in the production cost structure has decreased dramatically over the years since the 1920.

However, several writers have revealed that many manufacturing firms particularly in Western countries continue to allocate overhead costs on the basis of direct labor despite

**Table 8.** Main Overhead Allocation Bases

| | *Australia* % | *Japan* % |
|---|---|---|
| Direct labor hours/cost | 73 | 68 |
| Machine hours | 17 | 27 |
| Units of output | 17 | 32 |
| Direct material cost | 14 | 36 |

Responses: 226 in Australia and 212 in Japan

the dramatic decline of its significance (Kaplan, 1984; Shank & Govindarajan, 1988; Yoshikawa et al, 1989, Langfield-Smith et al, 1996). More importantly, some writers have noted, particularly when the direct labor component in the cost structure of a manufacturing firm has declined significantly, the continuous use of direct labor as the principal cost allocation base may distort product costs, leading to miscosting and mispricing of products (Cooper & Kaplan, 1988a). Accordingly, more refined alternatives such as ABC have been advocated as being more suitable for handling overhead under modern manufacturing conditions. As such, in order to obtain some empirical evidence on overhead allocation in Australia and Japan, we asked the respondents in our survey to indicate the methods being used by their companies for allocation of overhead. The responses received are presented in Table 8.

The data in this table showed no evidence of using non-traditional methods even by Japanese companies. Direct labor has been reported by our respondents as the most extensively used overhead allocation base in both Australian and Japanese companies. This result of the Australian survey in our study confirms the finding of a previous Australian study by Joye and Blayney (1990) that 71 percent of Australian companies allocated overhead on the basis of direct labor. Our finding of the Japanese experience is also consistent with the findings of two other surveys conducted by Kato (1986) and Yoshikawa et al, (1989).

It is interesting to note, however, that the continuous use of direct labor as the major overhead allocation base in Japan is said to be a deliberate act of company policy (Hiromoto, 1988). According to Bromwich and Bhimani (1989), even though many Japanese manufacturers are aware that with increased automation in their plants, direct labor may not have a cause-and-effect relationship with factory overhead, they continue to use direct labor as the principal basis to allocate overhead because they are said to believe that using direct labor for this purpose provides organizational sub-units with an incentive to use less labor. In other words, the use of direct labor as the major allocation base in Japanese companies provides a direct stimulus to automate production (Yoshikawa et al, 1989).

The accounting literature in recent years has shown that in some industries, when direct labor costs constitute a small percentage of total costs, an increasing number of manufacturers have begun to treat direct labor as indirect costs and charge them to overhead (Horngren and Foster, 1991). Since such a treatment could affect the size of both labor and overhead of manufacturing companies, we included another question in our survey to cover this aspect of product costing. The responses to this question revealed that 35 percent of Japanese companies and 15 percent of Australian companies charged direct labor to

**Table 9.** Manufacturing Cost Structure

| | *Australia* | | | *Japan* | | |
|---|---|---|---|---|---|---|
| *Type of industry* | *Direct material %* | *Direct labour %* | *Factory overhead %* | *Direct material %* | *Direct labour %* | *Factory overhead %* |
| Food and beverages | 62.3 | 21.5 | 16.6 | 72.1 | 12.8 | 15.2 |
| Fabricated metal products | 52.7 | 22.7 | 24.6 | 57.6 | 18.4 | 24.0 |
| Textile | 50.2 | 27.1 | 22.6 | 52.9 | 20.8 | 26.4 |
| Chemical products | 65.7 | 16.8 | 17.6 | 57.8 | 15.6 | 26.6 |
| Machinery and computers | 44.8 | 23.5 | 31.7 | 63.6 | 15.1 | 21.3 |
| Electronic & electric equipment | 54.1 | 23.8 | 22.1 | 63.7 | 16.0 | 20.3 |
| Transportation equipment | 63.3 | 15.5 | 21.3 | 59.9 | 16.0 | 24.1 |
| Furniture and fixtures | 55.3 | 20.6 | 24.1 | 65.0 | 15.0 | 20.0 |
| Miscellaneous | 51.9 | 25.0 | 23.2 | 54.2 | 18.0 | 27.8 |
| Total | 56.5 | 22.1 | 21.4 | 59.6 | 16.3 | 24.1 |

Responses: 208 in Australia and 194 in Japan

overhead. This indicates another possible reason for the higher percentage of overhead in the manufacturing cost structure of Japanese companies shown in Table 9.

It has been indicated in the accounting literature that technological developments in the past few decades have made significant changes in the cost structure of manufacturing enterprises (McNair et al, 1988; Berliner & Brimson, 1988; Scapens, 1991). For the purpose of gaining some understanding of the nature of such changes in Australian and Japanese companies, we asked the respondents in our survey to state each cost element as an approximate percentage of total manufacturing costs in their firms. Their responses are illustrated in Table 9. As shown in this table, direct labor represented 16.3 percent and 22.1 percent of total manufacturing costs in the Japanese and Australian firms respectively. However, when the cost structure was classified by industry groups wider differences among cost elements became apparent in some groups of industries. These differences may be attributable, at least partly, to the different nature of each industry group. In addition to the responses demonstrated in Table 9, both groups of respondents, in reply to another question, indicated that they experienced a tendency of decreasing direct labor and increasing factory overhead in recent years.

## Inventory Levels

Tying up of large sums of funds in inventories to some extent prevents a business from investing. In addition to the price paid for the inventory, various types of acquisition and carrying costs are associated with inventories. Therefore, these factors usually have adverse effect on the profitability of a firm. It has also been pointed out by many writers in recent years that the Japanese invention of maintaining no inventories or very low levels of inventories under their Just-In-Time (JIT) system was a major weapon that helped them in beating even the most powerful competitors in the international market place (Kaplan, 1983; Gietzman and Inoue, 1991). However, since no current empirical evidence other

**Table 10.** Inventories as a Percentage of Total Assets

| Type of industry | Australia: Finished goods inventory % | Australia: Work in process inventory % | Australia: Raw material inventory % | Japan: Finished goods inventory % | Japan: Work in process inventory % | Japan: Raw material inventory % |
|---|---|---|---|---|---|---|
| Food and beverages | 10.6 | 2.1 | 11.3 | 2.5 | 0.2 | 0.9 |
| Fabricated metal products | 6.3 | 3.2 | 3.3 | 5.8 | 2.0 | 0.9 |
| Textile | 18.9 | 11.1 | 8.0 | 8.6 | 3.5 | 1.8 |
| Chemical products | 13.8 | 1.7 | 6.2 | 2.9 | 1.0 | 0.8 |
| Machinery and computers | 14.7 | 22.6 | 10.8 | 5.7 | 5.9 | 1.8 |
| Electronic & electron equipment | 11.4 | 15.7 | 22.1 | 4.7 | 12.0 | 1.3 |
| Transportation equipment | 12.3 | 6.3 | 6.0 | 1.3 | 15.6 | 1.2 |
| Furniture and fixtures | 9.0 | 2.7 | 2.7 | 11.0 | 0.7 | 2.0 |
| Miscellaneous | 14.7 | 6.1 | 10.2 | 4.2 | 2.5 | 1.6 |
| Total | 11.2 | 4.7 | 7.6 | 3.8 | 4.6 | 1.3 |

Responses: 184 in Australia and 203 in Japan

than anecdotal information was available on this aspect of manufacturing firms even in Japan, we asked our respondents to indicate the costs of inventories and total assets in their organizations at the end of the last financial year. The information received is summarized in Table 10.

As anticipated, each type of inventory as a percentage of total assets, on average, was lower in the Japanese companies. This situation revealed by our data supports the widely held view that the Just-In-Time system aimed at minimizing inventories is popular among Japanese manufacturers (Gietzman and Inoue, 1991). Comparatively, Australian companies in our survey reported higher percentages in respect of finished goods and raw materials inventories. In this regard, it is important to note that a recent study has revealed that many Australian manufacturing firms are often located long distances from their suppliers, thereby facing high transportation costs and relatively low inventory holding costs. As a consequence, such manufacturers tend to prefer holding inventories rather than receiving a steady supply of raw materials when needed, on the basis of a cost-benefit analysis (Kendall and Steen, 1998). However, the nature of finished goods and work-in-process inventories has not been examined in the above study.

## Quantitative Techniques

Accounting textbooks in recent years have devoted increased attention to the use of quantitative techniques in management accounting (e.g. Garrison & Noreen, 1994; Burch, 1994; Rainborn et al., 1996; Langfield-Smith et al, 1996). Therefore, we were interested in finding out what quantitative techniques are actually used by large manufacturing firms in Japan and Australia. Accordingly, the respondents in our study were asked to indicate the quantitative techniques they used in their cost and management accounting activities. The summarized responses are presented in Table 11. The most striking finding emanating

**Table 11.** Use of Main Quantitative Techniques

| | *Australia* % | *Japan* % |
|---|---|---|
| Forecasting techniques | 59 | 38 |
| Statistical analysis | 46 | 35 |
| Simulation | 9 | 36 |
| Input-output analysis | 20 | 9 |
| Inventory models | 42 | 29 |
| Spreadsheet analysis | 92 | 23 |

Responses: 212 in Australia and 206 in Japan

from the data in this table is that Australian accountants have used quantitative techniques, in general, more extensively than their Japanese counterparts. A similar situation between U.S. companies and Japanese companies was reported by Kato (1989) as a finding of a U.S.-Japan comparative study on the use of quantitative methods in cost and management accounting practices. However, according to our data, the use of simulation as a quantitative technique in management accounting practices appeared to be much more extensive in Japanese companies than in Australian companies. A possible reason for this may be that simulation exercises are well amenable to the collective decision making *(ringi)* philosophy of Japanese firms. In the collective decision making process a problem is analyzed from different perspectives and possible alternative solutions are considered collectively on the basis of views and suggestions of all members of the group (Van Zandt, 1970). What-if types of questions allowed in simulation models are frequently used in this process (Kato, 1989). Another difference emerged from the above data was that Australian accountants used spreadsheet analysis much more widely than their Japanese counterparts. The use of inventory models was also considerably lower in Japan. Kato (1989) in the study mentioned previously has also reported a similar situation in Japanese companies when they were compared with similar companies in the United States. This seems quite realistic due to the fact that the Just-In-Time inventory system used by several Japanese manufacturers has reduced the need for using traditional inventory models.

## Performance Evaluation

There has been a sizable amount of negative criticism on the use of return on investment (ROI) by U.S. companies for evaluating performance of their divisional managers (Mechlin & Berg, 1980; Kaplan, 1984; Sakurai, 1991). The essence of this criticism lies in the belief that ROI leads managers to place excessive emphasis on short-term profitability, which in turn brings about a decrease in research and development investment, with a corresponding restriction on innovation. For example, according to Sakurai et al (1989), "it might be that the United States could have expanded its economy much more, if most companies had not used ROI to measure performance." Conversely, it has also been said that many Japanese companies prefer to use return on sales (ROS) for this purpose in order to overcome the above limitation. The essence of their approach lies in separating ROI into two parts, ROS and turnover. By doing this, they obtain separate measurements, and thus

**Table 12.** Performance Evaluation Measures

| | *Australia* % | *Japan* % |
|---|---|---|
| ROI (Return on investment) | 59 | 37 |
| RI (Residual income) | 6 | 9 |
| ROS (Return on sales) | 40 | 82 |
| ARR (Accounting rate of return) | 4 | 7 |
| Variances | 48 | 20 |

Responses: 216 in Australia and 200 in Japan

**Table 13.** Product Costing Methods

| | *Australia* % | *Japan* % |
|---|---|---|
| Job order costing | 30 | 40 |
| Process costing | 52 | 46 |
| Hybrid costing | 9 | 27 |
| Batch costing | 15 | 4 |
| Product life cycle costing | 5 | 13 |
| Activity based costing (ABC) | 23 | 2 |

Responses: 221 in Australia and 215 in Japan

avoid ROI weaknesses (Sakurai et al, 1989). In this respect, Sakurai (1991) further states that ROI is oriented toward stockholders while ROS is market-oriented and provides more useful insights to Japanese manufacturers for making price decisions in target costing.

In order to obtain further empirical evidence on the above issue from Australian and Japanese companies, we asked our respondents to indicate the measures they used for evaluating divisional performance. The responses received, as shown in Table 12, confirmed the Japanese situation discussed above. Thirty-seven percent and 82 percent of Japanese companies reported to have used ROI and ROS respectively as opposed to 59 percent and 40 percent of Australian companies. Our results also showed that the use of variances for performance evaluation was much less popular in Japan than in Australia. This result is consistent with our finding on the importance of standard costing discussed previously.

## Product Costing

As a result of numerous technological developments in the recent decades the manufacturing environment has undergone fundamental changes, permitting manufacturers to move from mass production of a few standardized items to efficient production of small batches of customized products on short notice. These changes created a need for more refined methods of product costing (Kaplan, 1984). In response to this need, several new approaches such as activity-based costing and target costing have been developed (Cooper & Kaplan, 1988b; Sakurai, 1989). To gain some factual information on the use of such approaches in Australia and Japan, we asked the respondents in our survey to indicate the

**Table 14.** Major Participants in New Product Cost Estimation

| | *Australia* % | *Japan* % |
|---|---|---|
| Production Manager | 79 | 44 |
| Product designer | 42 | 69 |
| Accountant | 84 | 46 |
| Purchasing manager | 52 | 23 |

Responses: 225 in Australia and 210 in Japan

product costing methods being used in their manufacturing operations. Table 13 presents a summary of their responses. Most of the Australian companies used process costing (52 percent) or job order costing (30 percent) as the main product costing method. A greater number of Japanese companies reported the use of job order costing as well as hybrid costing which is a mix of both job order costing and process costing. This points to a situation observed by some writers that Japanese manufacturers are increasingly using hybrid systems because with the increased use of new manufacturing technologies many of them have begun to cater for more and more individual customer preferences as a strategy for increasing their market share and competitiveness (Stewart, 1992; Takahashi, 1992). However, since our data are confined to the situation prevailed at the time of our survey in 1997 they cannot explain whether such changes have been actually occurring in recent years. Another striking difference revealed by our data was that the users of activity-based costing (ABC) in Japan were as low as 2 percent compared to 23 percent in Australia. This result corroborates the situation observed previously under Table 2.

Particularly in Japanese manufacturing enterprises where target costing is widely used, the product designer plays a greater role in the product cost estimating process than the cost accountant. For the purpose of obtaining empirical evidence on this view of product costing, we requested our respondents to indicate the major participants in the new product cost estimation process in their firms. Table 14 gives the summarized responses to this question. Accordingly, the accountant has accounted for the highest percentage participation (84%) in new product cost estimation in Australian companies as opposed to the highest participation (69%) by the product designer in Japanese companies. In the context of the different nature of product cost estimation processes in the two countries, this finding can be considered realistic. According to Worthy (1991), when developing a new product, manufacturing companies in Western economies, in general, typically design it first and then calculate the cost. If the cost seems too high, the product is either sent back to designers for modification or the company settles for a smaller profit margin. As such, the accountant occupies a prominent place in the product cost estimation of such companies. By contrast, in Japanese companies where target costing (*genka kikaku)* is widely used, it is the product designer who plays the prominent role in the product cost estimating process.

## Costing Systems

Accounting literature in recent years indicated an increasing tendency of new developments in costing systems as a result of changes taken place in the manufacturing environ-

**Table 15.** Costing Systems

| | *Australia* % | *Japan* % |
|---|---|---|
| Actual costing | 31 | 48 |
| Standard costing | 69 | 31 |
| Absorption costing | 30 | 27 |
| Variable costing | 17 | 20 |

Responses: 229 in Australia and 217 in Japan

**Table 16.** Significant Changes to Cost Accounting Systems

| | *Australia* % | *Japan* % |
|---|---|---|
| 1-4 times | 53 | 78 |
| 5 or more times | 11 | 14 |
| No change | 36 | 8 |
| | 100 | 100 |

Responses: 221 in Australia and 173 in Japan

ment. Based on this tendency, we asked the respondents to indicate the costing systems they used in their organizations. Critical features of their responses included a relatively higher percentage use of standard costing in Australian companies (Table 15). This is consistent with the responses reported previously on standard costing. However, it is important to note in this respect that several writers in the recent past have questioned the relevance of conventional standard costing systems to modern manufacturing environments (Kaplan, 1990; Sakurai, 1990; Drury, 1992). The Japanese companies, on the other hand, indicated a higher percentage use of actual costing than their Australian counterparts. A similar situation has been reported by Nagamatsu and Tanaka (1988) in a comparative survey conducted in the U.S. and Japan during 1986-87. According to their survey, the percentage use of actual costing was 26 in the U.S, and 33 in Japan. With regard to absorption costing and variable costing, our data did not indicate any significant difference between Australian and Japanese companies. This aspect of the results is consistent with the finding of a study by Inoue (1988), which reported that there was about the same use of variable (direct) costing and full (absorption) costing in Japan, USA, UK and Canada.

It has been suggested by many writers that if accounting is to contribute more effectively to the success of manufacturing organizations, accountants must make timely changes in their accounting systems to suit the changes occurred in the manufacturing environment (Kaplan, 1984; Peavey, 1990; Mackay, 1991). With the intention of obtaining some factual information on this aspect, we included a question in our survey questionnaire, asking the respondents to indicate whether they made any significant changes to their cost accounting systems within the past two decades and, if so, to give the number of changes they have made. The responses, as summarized in Table 16, indicated that 64 percent of Australian companies made changes to their cost accounting systems while the corresponding rate for Japanese companies was 92 percent. This supports the view that Japanese companies have

introduced more timely changes to management accounting practices than their Australian counterparts.

## SUMMARY AND CONCLUSION

It is important to mention a few limitations of this study before any conclusion may be drawn. Some of the responses may have been influenced by the problems of question bias and misinterpretation. Also, despite the mailing of questionnaires to the largest manufacturing companies in both countries, the sample firms may not have been the 'largest' because of the high non-response rate. Despite these imperfections, the results of the study provide some important insights into the differences in management accounting practices of Australian and Japanese manufacturing firms.

A most striking difference revealed by the survey data is that while management accounting practices of the Australian companies place an emphasis on cost control tools such as budgeting, standard costing and variance analysis at the manufacturing stage, those of the Japanese companies devote a much greater attention to cost planning and cost reduction tools based on target costing at the product planning and design stage. In this regard, it is important to note the observation of Howell and Sakurai (1992) that "Japanese companies seem to understand better than their Western counterparts that costs should be managed and avoided during the product planning and development cycle rather than after products have entered full scale production." Furthermore, Australian companies appear to have placed greater emphasis on budgets and historical accounting statements while Japanese companies concentrating more heavily on target costing and cost-volume-profit analysis (Table 2). This emphasis of Australian companies suggests that they pay greater attention to accounting tools that are primarily used for planning and controlling costs and preparing financial statements. By contrast, the concentration of Japanese companies, particularly on target costing, indicates their greater attention to cost management. Since cost management places a heavier emphasis on cost reduction relative to cost control without jeopardizing product quality and other desirable characteristics it is said that this aspect of Japanese management accounting practices has contributed greatly to Japan's success in achieving a dominant position in the global competitiveness (Sakurai, 1991; Worthy, 1991). Another noteworthy difference emanated from our survey is that activity-based costing (ABC) appears to be more popular among Australian companies while it is rarely used in Japanese companies. This is similar to the situation observed by Sakurai (1991) in the US. and Japanese companies. On the other hand, despite the decreased labor component in the manufacturing cost structure, manufacturing companies in both countries seem to allocate factory overhead mainly on the basis of direct labor. Yet, as pointed out earlier, this practice in Japanese companies is said to be a deliberate act aimed at reducing labor (Hiromoto, 1988). However, an important difference is seen in the levels of inventories maintained in the two countries. It is apparent from our survey data that the inventory levels are significantly lower in Japanese companies for finished goods and raw materials. This seems consistent with the Japanese concept of Just-In-Time inventory system, which aims at minimizing inventories without hindering production and sales. By contrast, the higher inventory levels of Australian manufacturers may weaken their competitiveness and profitability because tying up of large sums of funds in inventories can restrict investments

and increase acquisition and carrying costs. It is also seen from our data that more Australian companies have used the return on investment (ROI) measure for evaluating divisional performance. In contrast, most of the Japanese companies have used the return on sales (ROS) measure for such purposes. It is important to note that this practice is said to have helped the Japanese manufacturers in overcoming the adverse effect of ROI on their research and development investment (Sakurai et al, 1989). Another noteworthy difference revealed by our survey is that 92 percent of Japanese companies in the sample have made changes to their cost accounting systems within the last two decades while the corresponding rate for Australian companies was 64 percent. This shows that Japanese companies have introduced more timely changes to management accounting practices than their Australian counterparts.

Finally, since our study was confined to situations at a particular point in time the survey data could not explain what management accounting practices in Australia and Japan have changed over time. In certain periods of time, however, some of these practices in both countries may have been different from those revealed by our survey. For example, although our data indicated that the discounted cash flow (DCF) approaches to investment appraisal were not popular among Japanese companies at the time of our survey, as a consequence of the financial crisis erupted recently in Asia it appears that many Japanese companies are now placing emphasis on DCF approaches to evaluate the efficiency of capital investment projects. The increased use of DCF appears to be driven by the Japanese banks, which are suffering from bad debt losses and a lack of interest in financing new projects. Similarly, based on the experience of the Asian financial crisis, several other important changes are likely to occur particularly in the Japanese financial and management accounting practices. As such, further research is needed to examine what management accounting practices in these countries have changed in the recent past and in what direction they are moving at the present time.

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# An Empirical Investigation of Factors Affecting the Selection of Markets for Foreign Bond Issues

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**Key Words:** Foreign bonds; Accounting similarity/diversity; Selection of markets for foreign bonds; International capital markets; Classification of accounting systems; Disclosure requirements.

***Abstract:*** *This study investigates factors affecting the selection of markets for issuing foreign bonds and assesses the increase in the likelihood of issuing in a given market when certain variables are present. Logistic regression models evaluate similarity/diversity of accounting systems; disclosure levels; and the existence of a parent/subsidiary and/or an equity listing in the market country as independent variables. The results support the hypothesis that accounting diversity is an influencing factor in selection of a market for issuing foreign bonds.*

The structure of the capital markets has undergone dramatic changes in terms of globalization in the last quarter of this century. Key financial markets are now integrated or at least internationalized.[1] The internationalization of the capital markets has provided additional impetus to understand the economic effects of accounting diversity among nations. This study focuses on one sector of the global capital markets—the foreign bond market. The objective of the study is to determine whether a firm's choice of a capital market for issuing foreign bonds is influenced by the similarity (diversity) between the accounting systems of the issuer's country and the country of issue.

Finance and economic theories postulate that in perfectly competitive and efficient markets, the free flow of capital between countries (markets) will assure that a higher-yield project in one country will not be forgone for lack of funds while a lower-yield project in a country of abundant capital is pursued. This free flow of capital will result not only in the efficient allocation of capital; it will also enhance the ability of investors to smooth consumption over time by borrowing or lending on a global basis (Levy, 1990). Funds will naturally flow to those markets offering the greatest return for a given level of risk. In this perfect world, the modern financial manager would have little problem determining the

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optimal market in which to raise funds. However, just as barriers exist to the free flow of goods in international trade (e.g., tariffs, import restrictions, quotas, etc.), constraints exist that can impede the free flow of financial capital between nations. One such constraint is the diversity of accounting and regulatory requirements in different national financial markets (Bloomer, 1997). An inefficient allocation of capital might result if the free flow of debt funds is impeded by legal statutes and accounting standards. Accounting diversity could then have a significant economic effect.

The international markets offer a firm the rewards of greater flexibility in the selection of placement sites, currencies, and instruments. The price the firm pays for this additional flexibility includes not only the cost of the funds themselves, but also the incremental cost of compliance with the regulations of the market entered (including information processing and competitive costs). Firms will attempt to minimize the total cost of capital, including these compliance costs. The financial burden imposed by the severity of the disclosure and regulatory constraints is certainly not the only factor that influences the choice of the market and/or the currency of denomination. However, recent developments and changes by various governments in the regulatory environment for bond placements suggest that it has been, and continues to be, a factor that contributes to the competitive advantage of some capital (funds) markets (Bloomer, 1997; Karmel & Head, 1993; Euromoney, 1991). Firms electing to issue international bonds can choose between eurobonds and foreign bonds. Eurobonds are instruments denominated in the currency of a country and issued in a market (or markets) located outside that country (Eiteman et al., 1995). Often they are issued simultaneously in several capital markets. The very nature of a eurobond implies flexibility—issuers can avail themselves of funds in multiple markets while maintaining the choice of currency of payment. Because of the structure of the eurobond market, these instruments are not subject to intense regulation, have relatively minor disclosure requirements, and are bearer bonds and thus usually not subject to taxation (Eiteman et al., 1995; Sarver, 1990). The lack of oversight for these issues will limit entry into this market to firms considered low risk, i.e., exhibiting a high credit rating and high name recognition. Eurobond issues comprise approximately 80 percent of the nominal value of outstanding international bonds (OECD, 1996). Because of its sheer size and flexible and unregulated nature, this market has generated considerable interest in recent years.

The second type of international bond—foreign bonds—is issued by a foreign borrower in the domestic market of a country and is denominated in that country's domestic currency (Eiteman et al., 1995; Grabbe, 1991). For example, a Swiss-franc denominated bond issued in the Zurich market by a British firm would be classified as a foreign bond. Entrants into the foreign bond market subject themselves to the regulations of the securities commission supervising the activities of the market. These regulatory requirements can include the presentation of additional information and promulgation of financial statements restated and/or remeasured in accordance with locally accepted accounting principles.[2] When the accounting practices of the country of issue differ significantly from those mandated by the country of the issuer, the compliance process can be costly. This market accounts for approximately 20 percent of the nominal value of outstanding international bonds (OECD, 1996).

The eurobond market has received the most research attention, since it is four times as large as the foreign bond market. However, the two markets are clearly different in

several aspects. The mix of firms issuing in the foreign bond market would not be expected to be the same as those issuing in the eurobond market. The foreign bond market has historically been the only one available to a large number of potential borrowers because of their size and/or reputation. Issuers in the foreign bond market are perceived as being riskier and must comply with market regulations not required in the eurobond market. These differences clearly imply that one cannot assume, without verification, that the research findings for the eurobond market would be the same as those for the foreign bond market.

This study investigates the extent to which accounting diversity is related to the flow of funds in the foreign bond market. Accounting diversity (similarity) is measured by the types of accounting systems of the issuer's country and the market country, and the difference in the disclosure levels of the issuer's country and the market country. Two additional variables that potentially mitigate the effects of accounting diversity are included: the existence of a parent/subsidiary in the country of issue, and an established equity-exchange listing in the country of issue. The study is limited to straight, fixed-rate debt issued in the period January 1, 1985, through December 31, 1993, in the six major foreign bond markets: the United States, the United Kingdom, the Netherlands, Switzerland, Germany, and Japan.

The following sections of the paper first summarize the previous relevant research and then present the study variables, the hypotheses, and the data sources. The next two sections describe the sample and discuss the results of the analysis. The final section presents the conclusion of the paper and provides suggestions for future research.

## LITERATURE REVIEW

It is generally agreed in the international accounting literature that accounting diversity and different levels of disclosure practices around the world affect the decisions of capital market participants. Choi and Levich (1990) interviewed capital market participants from fifty-two institutions in the United States, the United Kingdom, Japan, Switzerland, and Germany and asked if accounting diversity affected their capital market decisions. One-half of those queried acknowledged an effect on their decisions. Choi and Levich conclude: A major implication of our findings is that accounting differences *are* important and affect the capital market decisions of a significant number of market participants, regardless of nationality, size, experience, scope of international activity, and organizational structure" (p. 81). Studies dealing with accounting diversity and reporting practices of different countries/capital markets can be classified into three categories.

The first category of studies examines the influence of differing disclosure requirements on the foreign equity-exchange listing decision. Biddle and Saudagaran (1989) found evidence to suggest that once a company has elected to list on a foreign exchange, the choice of the listing location is not random. Rather, it is influenced by the level of financial disclosure required by the exchange. Subsequent studies by Saudagaran and Biddle (1992 and 1995) found similar results. In another study, Biddle and Saudagaran (1991) found that the largest costs associated with foreign listings are attributed to satisfying equity-exchange accounting and disclosure requirements. These costs

arise from intercountry differences in accounting and auditing practices, financial reporting and registration requirements, and regulatory and legal restrictions.

The second category of studies examines the comparative disclosure practices and requirements of different countries. The early studies fall into two areas: (1) studies limited to a particular item of disclosure, e.g., segmental reporting or managerial forecasts (Gray, 1978a; Gray & Radebaugh, 1981; Gray, 1978b); and (2) studies that create a disclosure index or ranking based on the examination of corporate financial statements (Barrett, 1976, 1977; Kahl & Belkaoui, 1981; Choi & Bavishi, 1982; Cairns et al., 1984). Using the Price Waterhouse data gathered in 1973 and 1975, Nair and Frank (1980) focused on prescribed disclosure and measurement practices. Their study is significant in that it found that countries group differently when based on disclosure criteria than when grouped according to measurement practices.

Adhikari and Tondkar (1992) developed a composite disclosure index to measure the overall quantity and intensity of disclosure (financial and nonfinancial) required as part of the filing and listing requirements of 35 stock exchanges around the world. This index contains weighted disclosure scores for the stock exchanges in the study. The scores were computed on the basis of the relative importance of required disclosure items as indicated by the opinions of cross-national experts in the equity markets. They range from a high of 90.31 for the New York Stock Exchange to 49.02 for the Cairo Stock Exchange. These scores proxy the disclosure practices of different countries and highlight the fact that companies raising capital in other countries might be required to augment the financial and nonfinancial disclosures required in the country of their domicile.[3] For the purpose of measuring the required disclosure levels of markets in this study, the Adhikari and Tondkar (1992) disclosure index will be used.

The third category of studies attempts to classify the accounting systems of different countries on the basis of their similarity of accounting systems and disclosure practices. These studies have evolved from the early judgmental studies of the 1960s, through the empirical studies based on observed national accounting practices of the 1970s and 1980s, to the current statistically based clustering studies (Nobes, 1984; AlNajjar, 1986; Berry, 1987; Doupnik & Salter, 1993). These studies borrow their methodology from that employed in the biological sciences and categorize countries into class, order, family levels, etc. The variables that have been used to develop these hierarchies include underlying environmental factors—the country's legal system, users of financial data, economic system, etc. These factors have been suggested as causing or explaining a country's adoption and use of broad accounting concepts. The two most recent comprehensive classification studies, Salter (1991) and Doupnik and Salter (1993), rectify many of the problems of the earlier studies as well as provide current data on the accounting practices of fifty countries. To eliminate previous problems of subjectivity and improve the reliability of the information, Salter gathered data on 114 financial reporting practices from managing partners of international accounting firms. Cluster analysis was used to form groups of countries that are similar in accounting practices. The resulting clusters were tested for a statistically significant relationship between the country groupings and underlying environmental factors. A description of the clustering results is presented in the section "Study Variables and Data Sources." The analysis for the current study employs the Doupnik and Salter (1993) hierarchy to

operationalize the similarity or diversity of the current accounting practices of the market and issuer countries.[4]

### Relationship of Previous Studies to This Study

Studies have shown that accounting diversity has a significant economic effect in the equity markets. However, no study has examined the effects of accounting diversity on the selection of a market for the issuance of debt. If additional information processing and competitive costs affect the selection of markets for the placements of equity, the same effect should hold for placements of debt.

The entrants into the foreign bond markets differ from those accessing the international equity markets in many of the same ways that they differ from those in the eurobond market. Many firms entering the foreign bond market are smaller, have higher risk, and lack the reputation and history required to successfully raise funds in the international equity markets. Many come from emerging market countries and have few options to raise capital within their domestic markets. Thus, the additional costs associated with accounting diversity may impose a significant financial burden for these firms.

This study extends the previous research in two ways. First, it examines a specific area of the international debt market (foreign bonds) to determine whether the effects of accounting diversity observed in the equity market are replicated in the debt market. Second, this study applies the results of two previous studies by employing (1) the classification results of the Doupnik and Salter (1993) study to operationalize the accounting diversity variable, and (2) the disclosure index developed by Adhikari and Tondkar (1992) to quantify the relative disclosure burdens of the markets.

## STUDY VARIABLES AND DATA SOURCES

### Similarity of Accounting Systems

Among the potential costs of entering a foreign capital market are the information processing or competitive costs associated with complying with the accounting disclosure and regulatory requirements of that particular foreign market. For example, firms may be required to (1) restate and/or remeasure financial statements in accordance with local standards, (2) augment disclosure, (3) comply with local auditing/attestation standards, and/or (4) increase the frequency of reporting. Compliance costs will vary with the degree of diversity of accounting systems in the two countries.

Salter (1991) and Doupnik and Salter (1993) used cluster analysis to classify fifty countries by financial reporting practices. These studies suggest that the best global cluster solution occurred at the two-cluster level, with a strong local solution at the nine-cluster level (see Appendix A). The initial split (two clusters) produced a macro-uniform group and a micro-based group. Salter (1991) analyzed these two groups for differences in measurement and disclosure practices and concluded that, in general, macro-uniform countries (1) employ less complex measurement rules; (2) utilize more conservative income calculation criteria; (3) tend to be code-law countries that adhere

to tax requirements for financial reporting; and (4) provide less disclosure than do micro-based countries. It was further concluded that, in general, the micro-based countries (1) rely primarily on practitioners and other non-legislative sources to develop accounting principles; (2) tend to be less influenced by tax considerations; (3) are more likely to provide supplementary disclosures, including cash flows, segmental information, and interim reports; and (4) are more likely to disclose information about certain balance sheet items such as receivables, leases, and shareholders' equity. An examination of the underlying causal factors indicated that the fundamental reason for the two major classes of accounting systems (micro-based and macro-uniform) is the existence of differences in legal systems, languages, and antecedent political heritages.

In issuing bonds, firms from macro-uniform systems should incur higher costs in converting their financial statements to comply with the more stringent disclosure requirements and more complex measurement practices of micro-based accounting systems. Consequently, firms from macro-uniform markets should prefer to issue bonds in other macro-uniform markets, rather than in micro-based ones. Conversely, firms from micro-based markets, having already complied with the extensive disclosure and complex measurement requirements mandated by the micro-based systems, should encounter relatively few problems in adapting their financial statements to the requirements of another micro-based system. Additionally, firms from micro-based markets should have little difficulty with the less rigorous disclosure requirements and simpler measurement rules of the macro-uniform markets. As a result, socalled micro-based firms should be indifferent to floating a bond issue in either a macro-uniform or micro-based market (country). Thus, it is hypothesized:

**H1:** Firms from macro-uniform countries will be less likely to issue bonds in microbased markets.

Within the macro-uniform and micro-based groups, there exist substantial differences relating to measurement and disclosure practices and norms. The second-best solution found by Doupnik and Salter (1993) for categorizing countries is a nine-cluster segmentation that fragments the micro-based and macro-uniform clusters into two and seven groups (families) of countries, respectively (appendix A). The micro-based group consists of the British Commonwealth/Dutch family and the United States/Canada family. The seven families in the macro-uniform class are the Arab/Hybrid family, the Southern European family, the Sweden/Finland family, the South American Inflation-Adjusted family, and three singlecountry families—Costa Rica, Germany, and Japan.

The Doupnik and Salter (1993) results suggest that the groups or families of both the micro-based and macro-uniform countries differ across a relatively large number of financial reporting measurement and disclosure practices. This suggests that a firm could further minimize compliance costs by issuing foreign bonds in a market that is not only in the same first-level cluster as itself (i.e., macro-uniform or micro-based) but also in a country that was in the same or an adjacent nine-cluster-level family. Thus, it is hypothesized:

**H2:** Firms will be more likely to issue bonds in markets (countries) in their own or an adjacent cluster (family) than in markets (countries) in other clusters (families).

In accordance with the Doupnik and Salter (1993) classification, of the six markets to be evaluated, three—the United Kingdom, the United States, and the Netherlands are micro-based accounting system countries. The United Kingdom and the Netherlands are members of the British Commonwealth/Dutch family, while the United States is in the United States/ Canada family. The other three markets Germany, Japan, and Switzerland are macrouniform countries. Germany and Japan are single-country subgroups or families, while Switzerland is treated as a Southern European family country.[5]

### Disclosure Requirements

The extent, intensity, and nature of accounting disclosure requirements can vary significantly from one market to another. Costs associated with compliance with the disclosure requirements of another market may be viewed as flotation costs that increase the overall cost of the debt. Since firms wish to maintain the lowest overall cost of capital, they should prefer to enter a market with a lower disclosure burden than their home market. Thus, it is hypothesized:

> **H3:** Firms will be more likely to issue foreign bonds in markets (countries) with lower disclosure requirements than those of their domestic market.

To operationalize the disclosure-requirement variable, the disclosure scores (indexes) assigned to the markets in the Adhikari and Tondkar (1992) study have been used as surrogates for the relative disclosure burden in the markets for this study. The issuer's change in disclosure burden was computed by subtracting the disclosure index of the issuer country from the disclosure index of the market of issue. Thus, a negative change in disclosure burden would indicate that the bond was issued in a country with a lower required disclosure level.

### Presence of a Parent or Subsidiary in the Country of Issue

The existence of a parent firm or a subsidiary in a country would favor the issuance of debt in that country for several reasons: (1) greater name recognition in the potential market of issue; (2) the potential incidental benefit of increased marketing visibility; (3) the existence of an established credit record; (4) a reduction in financial statements restatement/remeasurement and disclosure compliance costs; and (5) the creation of a hedge for long-term exchange-rate risk.[6] If a parent or subsidiary in the market generates cash flow in the foreign currency, the issuer not only has the proceeds of the bond issue available to finance the foreign operations, but it can also use the foreign currency income stream to service interest and principal payments on the debt. This suggests that there should be a positive relationship between the existence of a parent or a subsidiary in a market and the likelihood of the selection of that market for the issuance of foreign bonds. Thus, it is hypothesized:

> **H4:** Companies will be more likely to issue foreign bonds in markets (countries) where there is a parent and/or subsidiary firm.

**Table 1.** Hypotheses, Variables, Measurements, and Predicted Relationships

| *Hypothesis* | *Variable* | *Measurement* | *Notation* | *Predicted Relationship* |
|---|---|---|---|---|
| 1 | Accounting Diversity | Doupnik & Salter 2-cluster classification | ISSUET | Direct |
| 2 | Accounting Diversity | Doupnik & Salter 9-cluster classification | ISSUEC | Direct |
| 3 | Disclosure Change | Adhikari & Tondkar Index | DIS CHG | Inverse |
| 4 | Parent/Subsidiary in Market | Yes/No | PAR/SUB | Direct |
| 5 | Equity Listing in Market | Yes/No | EQ LIST | Direct |

For purposes of this study, the influence of intercompany relationships was deemed to exist only in vertical relationships, not horizontal (lateral) ones. Therefore, if the parent was the issuing firm, it was considered as having a parent/subsidiary relationship for any market in which there was a subsidiary. However, if the subsidiary was the issuer, it was considered as having a parent/subsidiary relationship for only the market (country) of the parent. Lateral relationships other subsidiaries of the same parent in other markets (brother-sister firms) are less likely to generate the benefits enumerated above. Therefore, lateral relationships did not meet the criteria for this variable. The information source for this variable was the *International Directory of Corporate Affiliations (1992).*

### Established Equity-Exchange Listing in the Country of Issue

Firms that actively participate in the equity market of a country will already be preparing financial statements that comply with the accounting and disclosure requirements of that country. Therefore, firms should incur lower costs for bond issues in markets where they are currently listed on an equity exchange. This suggests that there should be a positive relationship between the existence of an established equity-exchange listing and the selection of that market for the issuance of foreign bonds. Thus, it is hypothesized:

**H5:** Firms will be more likely to issue foreign bonds in markets (countries) in which they are listed participants in the national equity market of that country.

The advantages gained from an established equity listing are deemed to exist for the issuer if either the issuer or its parent firm is listed on an exchange in the country of issue. The information source for this variable was the *International Directory of Corporate Affiliations (1992).*

Table 1 summarizes the variables of interest for this study, the measures used to code these variables, notations, and the expected relationships between these variables and the likelihood of issuance of foreign bonds in a given market.

## THE SAMPLE

The sample for the study was extracted from Bloomberg's Financial Data Base. The Bloomberg Data Base is an on-line, interactive database that tracks the equity, debt,

**Table 2. Classification of Issues by Market of Issue**

| *Market Type* | *n* | *Market Cluster* | *n* | *Market Country* | *n* |
|---|---|---|---|---|---|
| Micro-Based | 229 | U.S./Canada | 187 | United States | 187 |
| | | British/Dutch | 42 | United Kingdom | 19 |
| | | | | Netherlands | 23 |
| Macro-Uniform | 667 | S. European | 289 | Switzerland | 289 |
| | | Germany | 315 | Germany | 315 |
| | | Japan | 63 | Japan | 63 |
| Total | 896 | | 896 | | 896 |

derivatives, and commodities markets of 126 exchanges located in 58 countries. From the database, issues were selected for each study market that met the criteria of (1) straight, fixed-rate, foreign bond issues; (2) not issued by a government, a governmental agency, or a supranational; and (3) issued during the period January 1, 1985, through December 31, 1993, in one of the six markets included in the study.[7] The initial selection identified 1,089 bond issues. Of these, 164 were eliminated because the issuers were not from one of the twenty-eight countries common to the Doupnik and Salter (1993) and Adhikari and Tondkar (1992) studies. Of the remaining 925 in the sample, 29 were eliminated because the information could not be obtained for the equity listing and/or subsidiary variables. Thus, the final sample includes 896 bond issues. Tables 2 and 3 present details of the composition of the sample by the markets' types of accounting systems, the issuers' types of accounting systems, and the market of issue by the issuers' countries, respectively.

Of the 896 bond issues, 229 (25.6 percent) were issued in micro-based markets and 667 (74.4 percent) were issued in macro-uniform markets (Table 2). Of the 229 micro-based market issues, 187 were issued in the U.S./Canada cluster and 42 were issued in the British/Dutch cluster. Of the 667 macro-uniform market issues, the Southern European, German, and Japanese accounting clusters accounted for 289, 315, and 63 bond issues, respectively. The six markets included in the study, and the number of bond issues in these markets, are the United States, 187 issues; the United Kingdom, 19 issues; the Netherlands, 23 issues; Switzerland, 289 issues; Germany, 315 issues; and Japan, 63 issues. The six markets are in five different accounting families or clusters. Only the United Kingdom and the Netherlands are in the same accounting cluster.

The sample is almost evenly divided between micro-based (449 issues, 50.1 percent) and macro-uniform (447 issues, 49.9 percent) issuers (Table 3). Issuers are from seven of the nine families in the Doupnik and Salter (1993) hierarchy. There are no issuers from the Arab-Hybrid family[8] or the single-country family Costa Rica.

Table 3 also classifies the bond issues in each market by the home country of the issuing firm. In the United States, one issuer country, Canada, was dominant—accounting for 90 (48.1 percent) of the 187 U.S. issues. Firms from two countries, Japan (125 issues, 39.7 percent) and the Netherlands (93 issues, 29.5 percent), accounted for 69.2 percent of the 315 issues in the German market. Conversely, the distribution of the issu-

**Table 3.** Bond Issues by Classification of Issuing Firm and Market of Issue

| *Classification of Issuing Firm* | | | | | | *Classification of Market of Issue* | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *Micro-Based Markets* | | | | *Macro-Uniform Markets* | | | |
| *Issuer Type* | *n* | *Issue Cluster* | *n* | *Issuer Country* | *n* | *U. States* | *U. Kingdom* | *Netherlands* | *Total* | *Switzerland* | *Germany* | *Japan* | *Total* |
| Micro-Based | 449 | U.S./Canda | 215 | United States | 99 | 0 | 2 | 2 | 4 | 67 | 26 | 2 | 95 |
| | | | | Canada | 116 | 90 | 1 | 0 | 91 | 21 | 3 | 1 | 25 |
| | | British/Dutch | 234 | Luxembourg | 24 | 0 | 0 | 0 | 0 | 9 | 15 | 0 | 24 |
| | | | | Netherlands | 163 | 22 | 2 | 0 | 24 | 45 | 93 | 1 | 139 |
| | | | | Hong Kong | 3 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 2 |
| | | | | United Kingdom | 22 | 7 | 0 | 1 | 8 | 6 | 5 | 3 | 14 |
| | | | | Australia | 22 | 10 | 1 | 0 | 11 | 8 | 1 | 2 | 11 |
| | | | | | 449 | 130 | 6 | 3 | 139 | 156 | 143 | 11 | 310 |
| Macro-Uniform | 447 | Southern European | 157 | S. Korea | 32 | 17 | 0 | 0 | 17 | 0 | 0 | 15 | 15 |
| | | | | France | 89 | 5 | 2 | 8 | 15 | 46 | 22 | 6 | 74 |
| | | | | Italy | 2 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 1 |
| | | | | Denmark | 24 | 0 | 0 | 2 | 2 | 2 | 9 | 11 | 22 |
| | | | | Norway | 10 | 2 | 1 | 2 | 5 | 4 | 1 | 0 | 5 |
| | | Sweden/Finland | 72 | Sweden | 38 | 6 | 2 | 0 | 8 | 17 | 4 | 9 | 30 |
| | | | | Finland | 34 | 5 | 0 | 1 | 6 | 13 | 7 | 8 | 28 |
| | | South America | 8 | Mexico | 8 | 4 | 0 | 0 | 4 | 0 | 4 | 0 | 4 |
| | | Germany | 36 | Germany | 36 | 7 | 0 | 6 | 13 | 20 | 0 | 3 | 23 |
| | | Japan | 174 | Japan | 174 | 11 | 8 | 0 | 19 | 30 | 125 | 0 | 155 |
| | | | | | 447 | 57 | 13 | 20 | 90 | 133 | 172 | 52 | 357 |
| Total | 896 | | 896 | | 896 | 187 | 19 | 23 | 229 | 289 | 315 | 63 | 667 |

ers in the Swiss market was more even. Firms from the United States accounted for the largest percentage of the 289 Swiss issues (67 issues, 23.2 percent), with France (46 issues, 15.9 percent) and the Netherlands (45 issues, 15.6 percent) ranking second and third in importance.

No issuer country dominated the Japanese market. South Korea was the single largest issuer, with 15 (23.8 percent) bond issues. However, with Denmark, Sweden, and Finland accounting for almost half (44.4 percent) of the issues, there appears to be a Scandinavian factor in this market.

The two other markets, the Netherlands and the United Kingdom, have smaller representations in the sample. Of the 23 issues in the Netherlands, 16 (69.6 percent) are from geographically proximate countries: France, Germany, and Denmark. Japanese issuers accounted for 42 percent of the issues in the United Kingdom. No particular pattern is apparent in the remainder of the issuers in the United Kingdom. Because of the small number of issues, the inferences based on the analysis of the data for these two markets must be made cautiously.

## DATA ANALYSIS AND DISCUSSION

The analysis focuses on establishing a relationship between a set of independent variables and the likelihood of selecting a given market to issue foreign bonds. The analysis for this study must allow for the following conditions: (1) independent variables that are discrete, noncontinuous, or continuous measurements, and (2) no requirement that the predictor set have a multivariate normal distribution. The preferred model would be a single model that (1) has a dependent variable consisting of the six markets that are selected as a function of input characteristics; (2) tests the stated hypotheses; and (3) provides a measure of overall prediction ability. Further, the model would need to allow for the incorporation of information about the markets, as well as information about the issuing entities. Unfortunately, regression and discriminant type models use functions of the independent variables only. To overcome this obstacle, six individual logistic regression models were developed for the respective markets to test the hypotheses.

Logistic regression is a standard statistical tool employed when the dependent variable is qualitative and the independent variables are discrete, continuous, or noncontinuous (DeMaris, 1992). Further, logistic models make no assumptions regarding the distribution of the predictor variables (Afifi & Clark, 1990). The logistic regression model for multiple predictors and a dichotomous, categorical, dependent variable takes the form

$$\text{Log } O_M = \alpha + \beta_1 X_1 + \beta_2 X_2 + \ldots \beta_k X_k$$

where:

$O_M$ = odds of issuing in $\text{market}_M$
$\alpha$ = constant term
$\beta_k$ = log odds ratio (categorical variables) or the incremental log odds ratio (continuous variables) of issuing in $\text{market}_M$ for predictor variable $X_k$
$X_1 \ldots X_k$ = predictor variables

The dependent variable for the six foreign bond market models was stated as a dichotomous variable "Issued/Did Not Issue in the Market."

For the analysis, a separate logistic regression model was built for each of the six markets. Thus, six market-data sets were constructed: one for each of the six markets included in the study. By definition, a foreign bond cannot be issued in the firm's own country. Therefore, for each market, issuers from that particular market were not included in the data for that model. Because the accounting diversity variable was measured at two levels, two models were needed for each market-data set. For the analysis of accounting diversity when measured using the micro-based/macro-uniform dichotomy, the Issuer Type (ISSUET) model was used. When using the nine-cluster accounting classification measurement, the Issuer Cluster (ISSUEC) model was used. Both models were estimated for all six markets, resulting in twelve market models overall.

A composite model was constructed to measure how effectively the six ISSUET models predict the market of issue.[9] For each of the 896 issues, six probabilities were calculated (one for each market), using the six market models and the issuer characteristics. If the issuer was from one of the market countries, the probability of issuing in that market was set to zero. The composite model compared the probabilities, selected the market with the highest probability, and predicted that the issue would be offered in that market.

The independent (predictor) variables were those identified in the hypotheses: accounting diversity, equity listing in the market, parent/subsidiary firm in the market, and disclosure change. In the ISSUET models, the first three variables were dichotomous and were coded as "Yes/No" responses. In these models, a "Yes" response indicated that the issuer (1) had the same type of accounting system as the market; (2) was listed on the equity exchange at the time of issue; and (3) had a parent/subsidiary in the market country at the time of issue. The last variable, disclosure change, is the signed (positive/negative) difference between the disclosure indexes of the market and the issuer's country.

In logistic regression, the coefficient $\beta_k$ is the log of the odds ratio, and the Exp($\beta_k$) is the odds ratio. For the dichotomous variables, an odds ratio greater than one (less than one) is a measure that approximates how much more likely (unlikely) it is for issuance in a market for those with a "Yes" response than for those with a "No" response. For the continuous variable, the odds ratio indicates the increase (decrease) in the likelihood of issuing in the market for a one-unit change in the disclosure burden (Hosmer & Lemeshow, 1989).

In the ISSUEC models, accounting diversity is a categorical variable coded from one to nine for the statistical software to indicate the different clusters. The logistic regression procedure for indicator (categorical) variables with more than two categories does not produce a coefficient, Exp($\beta_k$), for the indicator variable as a whole. Coefficients can be determined if one market is compared to one other market, but it is not possible to determine a single coefficient when multiple simultaneous comparisons are made, as in this case. All possible odds ratios are internally computed for relationships between the categories of the variable. For example, a comparative odds ratio could indicate the likelihood of a firm's issuing in the U.S. market, given that firm's membership in the U.S./Canada cluster, versus the likelihood of a firm's issuing in the U.S. market, given that firm's membership in the Southern European cluster. As a result, there is no deter-

**Table 4.** ISSUET Models: Micro-Based versus Macro-Uniform
Support for Hypotheses and Level of Significance by Market, by Variable

| | | *Variable* | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | *Issuer Type* | | *Disclosure Change* | | *Parent/Subsidiary* | | *Equity Listing* | |
| *Market of Issue* | *n* | | *p-value** | | *p-value** | | *p-value** | | *p-value** |
| United States | 797 | S | 0.0000 | S | | S | 0.0000 | S | 0.0000 |
| United Kingdom | 874 | | | S | | S | | S | 0.0298 |
| Netherlands | 733 | | | | | S | 0.0000 | S | |
| Switzerland | 896 | | | S | 0.0001 | S | 0.0001 | | |
| Germany | 860 | S | 0.0000 | S | | S | 0.0000 | S | 0.0145 |
| Japan | 722 | S | 0.0000 | | | | | | |

*Notes:* S = The value of Exp (b) in the full model was in the direction that supports the hypothesis (see table 6, panel A).
* One-tailed *p*-value from the Stepwise a Model (alpha = .05 to enter).

**Table 5.** ISSUEC Models: Accounting Clusters Support
for Hypotheses and Level of Significance by Market, by Variable

| | | *Variable* | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | *Issuer Cluster* | | *Disclosure Change* | | *Parent/Subsidiary* | | *Equity Listing* | |
| *Market of Issue* | *n* | | *p-value** | | *p-value** | | *p-value** | | *p-value** |
| United States | 797 | (1) | 0.0000 | S | | S | 0.0000 | S | 0.0000 |
| United Kingdom | 874 | (1) | 0.0050 | | | S | | S | 0.0150 |
| Netherlands | 733 | (1) | 0.0040 | S | | S | 0.0060 | S | |
| Switzerland | 896 | (1) | 0.0000 | S | 0.0000 | S | | | |
| Germany | 860 | (1) | 0.0000 | S | 0.0110 | S | 0.0000 | S | 0.0270 |
| Japan | 722 | (1) | 0.0000 | | | | | | |

*Notes:* (1) The absence of a regression coefficient prevents determining if there exists support for the Related Hypothesis.
S = The value of Exp (b) in the full model was in the direction that supports the hypothesis (see table 6, panel B).
* One-tailed *p*-value from the Stepwise a Model (alpha = .05 to enter).

mination of statistical significance of individual categories within the indicator variable. Rather, a single *p*-value is reported to indicate the significance of the set of categories in the indicator variable.

## Results and Discussion of the Analysis

Logistic regression models were estimated using a stepwise selection procedure and with the full set of independent variables. The results are summarized in Tables 4, 5, and 6. Table 4 presents, by market of issue, the variables that support the hypotheses in the ISSUET stepwise and full models. In these models, the measurement of accounting diversity is the type of accounting system (micro-based/macro-uniform). Table 5 provides the same information for the ISSUEC models. ISSUEC models use the accounting cluster as the accounting diversity variable. Table 6, panels A and B, presents the actual values of $\mathrm{Exp}(\beta_k)$ (the odds ratios) and the levels of significance for the full models for the ISSUET and ISSUEC regressions, respectively.

**Table 6.** Exponent (b) and Significance Level of Study Variable, by Model

Panel A: Issuer Type: Micro-Based/Macro-Uniform (ISSUET) Full Model

| | | *Constant* | *ISSUET* | | *DIS CHG* | | *PAR/SUB* | | *EQ LIST* | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Market* | *n* | *Signif* | *Exp(b)* | *Signif* | *Exp(b)* | *Signif* | *Exp(b)* | *Signif* | *Exp(b)* | *Signif* |
| United States | 797 | 0.000 | 2.152 | 0.000 | 0.980 | 0.336 | 2.757 | 0.000 | 6.731 | 0.000 |
| United Kingdom | 874 | 0.000 | 0.251 | 0.030 | 0.982 | 0.000 | 1.164 | 0.767 | 3.670 | 0.044 |
| Netherlands | 733 | 0.000 | 0.159 | 0.016 | 1.025 | 0.478 | 5.038 | 0.001 | 3.232 | 0.108 |
| Switzerland | 896 | 0.000 | 0.981 | 0.907 | 0.968 | 0.003 | 1.878 | 0.001 | 0.859 | 0.525 |
| Germany | 860 | 0.000 | 2.418 | 0.000 | 0.987 | 0.214 | 2.355 | 0.000 | 1.643 | 0.028 |
| Japan | 722 | 0.000 | 7.457 | 0.000 | 1.015 | 0.520 | 0.297 | 0.047 | 0.680 | 0.613 |
| Hypothesized Value (1) | | | >1 | | <1 | | >1 | | >1 | |

Panel B: Issuer Cluster: (ISSUEC) Full Model

| | | *Constant* | *ISSUEC* | | *DIS CHG* | | *PAR/SUB* | | *EQ LIST* | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Market* | *n* | *Signif* | *Exp(b)** | *Signif* | *Exp(b)* | *Signif* | *Exp(b)* | *Signif* | *Exp(b)* | *Signif* |
| United States | 797 | 0.000 | | 0.000 | 0.984 | 0.570 | 3.213 | 0.000 | 4.029 | 0.000 |
| United Kingdom | 874 | 0.000 | | 0.009 | 1.006 | 0.867 | 1.290 | 0.627 | 3.641 | 0.048 |
| Netherlands | 733 | 0.565 | | 0.011 | 0.958 | 0.400 | 3.461 | 0.012 | 3.749 | 0.077 |
| Switzerland | 896 | 0.000 | | 0.000 | 0.911 | 0.000 | 1.411 | 0.100 | 0.875 | 0.583 |
| Germany | 860 | 0.126 | | 0.000 | 0.961 | 0.045 | 2.988 | 0.000 | 1.547 | 0.082 |
| Japan | 722 | 0.001 | | 0.000 | 1.005 | 0.858 | 0.329 | 0.073 | 0.653 | 0.578 |
| Hypothesized Value (1) | | | N/A | | <1 | | >1 | | >1 | |

*Notes:* (1) Indicates whether the coefficient should be > or < than 1 in the Hypothesized Relationship.
Significance level = 2 tailed $p$-value from the full model.
* No Exp(b) is computed for the indicator variable.

The evaluations of the two accounting diversity hypotheses (1 and 2) were made by considering the ISSUET and ISSUEC models individually. Three of the six ISSUET stepwise market models supported, at the .05 significance level, the relationship between the choice of a market and the type of accounting system of the issuer's country—i.e., Hypothesis 1, that macro-uniform issuers are more likely to issue in macr-ouniform markets. Several possible explanations may be considered for the three ISSUET market models (the United Kingdom, the Netherlands, and Switzerland) that have values opposite of what would support this hypothesis. First, the sample sizes were very small for the Netherlands and the United Kingdom, and this may produce misleading results. Second, there appears to be a geographic pattern to the issuers in the Netherlands. The majority of issuers in that market were from countries that either share a common border or are proximate geographically (see Table 3). Firms may have had sales or other business connections in the Netherlands (not accounted for by the study variables) that influenced the selection of that market. Further, the membership of most of these countries in the European Union (EU) may also have been an influencing factor. It is possible that the harmonization efforts of the EU, through its accounting directives, influenced the issuers in these two markets. In the United Kingdom, 42 percent of the foreign bonds issued in this market were by Japanese firms. How-

**Table 7.** Prediction Accurancy of Composite Model, by Market

| | *Market Prediction* | | | | | |
|---|---|---|---|---|---|---|
| | *Correct* | | *Incorrect* | | *Total* | |
| *Market* | *n* | *%* | *n* | *%* | *n* | *%* |
| United States | 99 | 52.9 | 88 | 47.1 | 187 | 20.9 |
| United Kingdom | 0 | 0.0 | 19 | 100.0 | 19 | 2.1 |
| Netherlands | 1 | 4.3 | 22 | 95.7 | 23 | 2.6 |
| Switzerland | 115 | 39.8 | 174 | 60.2 | 289 | 32.3 |
| Germany | 252 | 80.0 | 63 | 20.0 | 315 | 35.2 |
| Japan | 0 | 0.0 | 63 | 100.0 | 63 | 7.0 |
| Total | 467 | 52.1 | 429 | 47.9 | 896 | 100.0 |

ever, the remaining macro-uniform issuers were from EU countries. Finally, given the extremely low disclosure requirements and relatively simple measurement rules in the Swiss market, it was not unexpected that the ISSUET variable was not found to be significant.

Hypothesis 2 was tested with the ISSUEC models. The accounting cluster of the issuer was coded as an indicator (categorical) variable using the nine categories, one for each issuing cluster. As discussed earlier, the impact of the categorical variable as a whole is indicated by the significance level. The cluster variable was significant in all six ISSUEC market models, providing support for the hypothesis that cluster membership is an influential variable in the market-selection process. In the U.S., British, and Swiss models, the odds of issuing increased when the issuer was from the market's own cluster or an adjacent cluster. The German model strongly demonstrated that the most likely issuer was from its adjacent cluster, Japan. The Japanese model indicated that the odds of issuing increased when the issuing firm was from another adjacent cluster the Sweden/Finland cluster. Thus, support is given to the premise that membership in an adjacent cluster increases the odds of issuing in a market.

The value of the coefficient for the disclosure-change variable was in the direction that indicated support for the hypothesis in eight of the twelve full models. However, the support was significant in only three of the stepwise models. The value was counter to that indicated by the hypothesis in both of the Japanese models and in the Netherlands' ISSUET model. It should be noted, however, that odds ratios (Exp ($\beta_k$)) for all twelve models were very close to one, indicating that this variable had little effect on the likelihood of selecting the market. This is supported by the lack of significance in the stepwise models. It is possible that the explanatory power of disclosure differences is embodied in the accounting diversity variable.

The parent/subsidiary hypothesis had the strongest support of all the variables in the market-selection process. The value of the coefficient was in the direction that indicated support for the hypothesis in ten of the twelve full models. It was significant in seven of the stepwise models. Only in the Japanese models did the existence of a parent or subsidiary firm fail to increase the odds of issuing in that market. This result implies that "in-house" accounting expertise (available to the issuer when there was a

related firm in the market) may have resulted in reduced restatement/remeasurement costs associated with the issuance of foreign bonds. Additional factors may contribute to this strong relationship: (1) firms may be using the issuance of debt as a hedge against exchange-rate risk or to compensate for the inability to repatriate profits; and (2) the issuance of bonds in the parent's or subsidiary's country may have potential marketing/sales benefits for the firm.

Support was indicated for the equity-listing hypothesis by the value of the coefficient in eight of the full models: all six micro-based market models and both German models. It was a selected variable in both the ISSUET and ISSUEC stepwise models for the U.S., the United Kingdom, and Germany. An established equity listing at the time of issue appears to have been more important in the micro-based markets. This is understandable, since the micro-based accounting systems have relatively more complex measurement rules and require more extensive disclosures. The insight into the accounting system's requirements gained from compliance with the equity-exchange requirements may mitigate the effects of accounting diversity in these markets.

The sample contained multiple issues by the same firm during the study period. To test if a learning curve effect in the market-selection process biased the results, the regressions for each market were rerun, using only the first issue by a firm in each market. The results of these regressions were very similar to those obtained in the models containing all issues; thus, they do not appear to be significantly biased by the multiple issues.

The composite ISSUET model assessed how the market models performed overall. The results are presented in Table 7. The composite model correctly predicted the market of issue for 52.1 percent (467 of 896) of the issues; its accuracy varied widely from market to market. It did not correctly predict a single issue for Japan or the United Kingdom but did so for 80 percent of the issues in Germany. The low percentages of correct predictions for the Netherlands and the United Kingdom are not surprising, in light of the small number of issues in these markets from which to build the models. Since the stepwise regression did not do well in identifying significant variables in the models for Japan, one could readily anticipate that the model may not predict well for this market, either.

To determine if the inclusion of the study variables in the model provided incremental predictive effectiveness, the results of the composite model were compared to three other predictive models that did not incorporate any characteristics of the issuer or the market. The first model randomly selected a market for each issue from the possible markets, assigning equal likelihood to the selection of each market. For the 494 issuers that were from one of the six market countries, there were only five possible choices for the market. Thus, the probability of selecting the actual market of issue was 1/5. For the remaining 402 issuers, there were six possible choices for the market and the probability of being correct was 1/6. The expected value of the correct predication rate was 18.5 percent,[10] with a standard deviation of 1.3 percent. The composite model prediction rate was greater than 25 standard deviations above the baseline rate, using this method.

A second model also randomly selected a market from the possible markets but set the probability of issuing in a market proportional to the actual number of issues from the sample in that market. For issues not from a market country, the denominator to cal-

culate the probability was 896. For issues from a market country, the denominator was 896 minus the number of issues from that country. The expected number of correct predictions and the standard deviation were approximated by simulation. The average number of correct predictions for 5,000 simulations of the 896 issues was 266.7, or 29.8 percent, and the standard deviation was 13.3 or 1.5 percent. The model predication rate was 15 standard deviations above the baseline, using this method.

A third model assigned all issues to the market with the largest number of issues. The 860 issues from countries other than Germany were assigned to Germany, with 315 of the 860 being correct. The German issues were assigned to Switzerland, the market with the second-most issues. Twenty of the 36 German issues were correct. Overall, this naive model predicted 335 of the 896 (37.4 percent) issues correctly. This model has no variation in prediction and, therefore, a standard deviation of zero. The test to determine if the composite model prediction rate of 52.1 percent significantly exceeded the 37.4 percent rate of the naive model produced a $p$-value of virtually zero.

The composite model, using the selected factors, significantly improved the prediction rate over models that did not include the study variables. The model did not account for all of the factors influencing the placement of foreign bond issues but focused on the impact of those associated with accounting diversity.

## SUMMARY AND CONCLUSIONS

The potential problems resulting from differences in national accounting practices have been a concern in international accounting and finance since the 1960s. The internationalization of the capital markets has increased cross-border flows of funds. These changes have provided additional impetus to understand the effects of accounting diversity on capital flows. Prior studies have addressed the effects of accounting diversity in the global capital markets. This study focuses on one sector of the global capital markets—the foreign bond market—to determine whether accounting diversity affects the selection of a specific market for foreign bond issues.

The main variable of interest for the study was the accounting system (accounting diversity) variable. To operationalize the variable, the Doupnik and Salter (1993) classification was used. In addition, other factors were examined that could influence the selection of a market for debt issues or mitigate the effect of accounting diversity: the existence of a parent/subsidiary in the market, an established equity-exchange listing in the market, and the market's required level of disclosure. The Adhikari and Tondkar (1992) global stock-exchange disclosure index was used to operationalize the required level of disclosure.

Logistic regression analysis focused on the identification of a relationship between the independent variables and the likelihood of selecting a given market to issue foreign bonds. The results indicate that a macro-uniform issuer is more likely to issue in another macro-uniform market, where the accounting system and the extent of required disclosure are similar. However, the influence of the market's accounting system is not as strong for the micro-based issuer. Support is indicated for the hypothesis that firms

prefer to issue in markets with lower required disclosure levels. However, this variable had a very limited influence on the likelihood of selecting the market.

The effect of the accounting diversity variable appears to be somewhat mitigated when the issuer has exposure to the market's accounting system requirements through an existing equity-exchange listing or the presence of a related firm in the market. This finding provides further support for the importance of the diversity of accounting systems between the issuer and the market of issue.

This study includes only one type of bond, issued within a limited time period. Were this study to be replicated for another time period and/or include a variety of bond types, other results might be obtained—particularly given the rapid changes in international markets. Additionally, it is acknowledged that other factors may influence the selection of a market for issuing foreign bonds, particularly the interest rate. However, the practical and theoretical problems encountered in trying to compare interest rates for multiple firms, across countries and time periods, precluded the use of this variable. This study focuses on only those factors relating to accounting diversity. Finally, the sample sizes for two of the markets were small, and thus any interpretation of the results for these markets must be made quite cautiously.

The results of this study should be of interest to firms considering borrowing funds in foreign markets, regulators of capital markets, and organizations attempting to harmonize accounting and disclosure requirements in capital markets. The findings also suggest areas for future research. Information is not a cost-free commodity. When entering the capital market of another country, accounting diversity results in costs associated with the restatement/remeasurement process. For regions that have harmonized accounting and disclosure requirements, these costs should be minimal. Thus, one interesting area for subsequent study would be an assessment of the role of accounting diversity when members of the European Union seek funds inside the EU versus outside the EU.

## APPENDIX A

### Doupnik and Salter's Classification*

| Micro-Based Subclusters | Macro-Uniform Subclusters |
|---|---|
| British Commonwealth/Dutch Family | Arab-Hybrid Family |
| Australia | Belgium |
| Botswana | Egypt |
| Hong Kong | Liberia |
| Ireland | Panama |
| Jamaica | Saudi Arabia |
| Luxembourg | Thailand |
| Malaysia | United Arab Emirates |
| Namibia | |
| Netherlands | Southern European Family |
| Netherlands Antilles | Colombia |
| New Zealand | Denmark |
| Nigeria | France |
| Papua New Guinea | Italy |
| Philippines | Norway |
| Singapore | Portugal |
| South Africa | S. Korea |
| Sri Lanka | Spain |
| Taiwan | |
| Trinidad and Tobago | Sweden/Finland Family |
| United Kingdom | Finland |
| Zambia | Sweden |
| Zimbabwe | |
| | South American Inflation-Adjusted Family |
| United States/Canada Family | Argentina |
| Bermuda | Brazil |
| Canada | Chile |
| Israel | Mexico |
| United States | |
| | Single-Country Families |
| | Costa Rica |
| | Germany |
| | Japan |

*Source:* Doupnik and Salter (1993)

## NOTES

1. The concept of integration requires that the law of one price holds between the markets—a security will sell in market B for the same price as in market A, adjusted for the exchange rate. Internationalization only requires significant inter-market trading activity, including transactions in both foreign and domestic assets by participants of both markets, and transfer of information between markets (Underhill, 1993).
2. Measurement refers to the methods used to determine the values assigned to assets, liabilities, and equities, and the methods used to compute income. Thus, remeasurement requires that transactions and financial statement amounts be revalued in accordance with the accepted

accounting principles of the foreign country. Restatement includes both the adaptation of the format of presentation and the augmentation of disclosure to comply with regulations. Although the markets examined in this study do not require restatement/ remeasurement of financial statements for foreign bond issues, all require the disclosure of additional information that may entail the remeasurement of certain financial items.

3. Inquiries of senior public accounting staff involved in the preparation of financial statements and filings for issuing foreign bonds in the six markets in this study indicated that the accounting and disclosure requirements for foreign issuers are substantially the same for debt and equity. Additionally, the extent of disclosure in the equity market creates an acculturation effect in the market and establishes an expectation level for disclosure in the debt market.
4. Roberts (1995) criticizes attempts to classify accounting systems in general and the Nobes study in particular. He posits that classifications in international accounting suffer from problems with the "attribute choice" that determines similarity and divergence and thus defines groupings. He proposes, as a solution, the selection of an attribute related to the intended use of the classification.
5. Although Switzerland is not included in the Doupnik and Salter (1993) study and thus is not classified in their hierarchy, the previous classifications that have included Switzerland have classified it as a macro-uniform, European-family country. In Berry's (1987) hierarchy, it is located in the European group, directly adjacent to Germany and Japan. While it does not appear in either of Nobes' (1983, 1984) classifications, it is grouped with other European-family countries in DaCosta et al. (1978); Frank (1979); and Nair and Frank (1980) studies.
6. The growth of the financial derivatives market in the 1980s expanded the opportunities to mitigate or eliminate foreign-currency risk through hedging in the international financial markets. Using forwards, futures, and options contracts, firms can directly hedge exchange-rate risk in five of the six markets included in this study, and indirectly in the sixth (the Netherlands). Additionally, currency swaps are routinely employed by major corporations to manage foreign-exchange risk.

   Anecdotal evidence obtained through conversations with representatives of the international bond departments of Salamon Brothers, Goldman Sachs, Merrill Lynch, Morgan Stanley, and Merrion Group confirmed what was found in the literature, i.e., that currency swaps (and other short- and medium-term hedging devices) are routinely used by issuers in the foreign bond market. Additionally, a partner of the international accounting firm of Ernst and Young confirmed that experience with audit clients indicated that foreign currency exposures are routinely hedged.
7. The six markets included in the study—the United States, the United Kingdom, Germany, Switzerland, the Netherlands, and Japan—were selected because more than 90 percent of the foreign bonds issued in 1986 were issued in these markets (Aliber, 1989).
8. Some bond issues were identified from the Arab-Hybrid family; however, in all cases the issuer was a government or a quasi-governmental agency.
9. A composite model was not constructed from the ISSUEC models, due to the complexity introduced with the nine categories in the variable.
10. $\{[494(1/5) + 402(1/6)]/896\} = 165.8/896 = 18.5$. This calculation was confirmed by 5,000 simulations of the 896 issues.

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# The Impact of Tax Rules on Financial Reporting in Germany, France, and the UK

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**Key Words:** Conformity, Tax link, France, Germany, UK, Financial reporting

***Abstract:*** *The paper examines the influence of tax rules on the financial statements of a company. An analysis of differences between tax reporting and commercial reporting in Germany, France and the UK shows that these differences lead to distorting effects with respect to the comparability of statements of companies from different countries, and with respect to non-compliance with the true and fair view requirement in cases where such influence of tax rules on the financial statements actually occurs. The comparison is conveyed with a view to the fourth EC company law directive, which itself does not take a position for or against the influence of tax rules. The strong influence of tax rules on the commercial accounts in Germany, in contrast to the UK, where such influence is minimal, and the moderate approach of France, which stands in between the two other countries, is discussed. The different approaches of the three countries can be considered an obstacle to comparability. In the opinion of the author, the required information in the notes on the influence of tax provisions does not compensate for the shortcomings of the influence of tax rules on the annual accounts of companies.*

In this essay the influence of tax law, and the specific tax rules on the financial statements, and its relation to EC law, are examined. The topic does not comprise accounting for taxes (e.g., accruals or whether to treat taxes as business expenses), neither does it include accounting for deferred taxes. It is rather commercial accounting according to tax rules instead of accounting rules (codified law, accounting standards) that will be addressed.

The laws of three countries, Germany, France and the UK, will be compared. With reference to taxation, the law to be discussed includes codified tax law and, in particular in the UK, common law. With respect to accounting, not only legally binding rules (codified company law, decrees, uncodified but still binding principles) but also, again in particular in the UK, accounting standards will be considered. Regarding actual accounting practices, deviations from the law will not be discussed; an empirical analysis is not included.[1] In

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other words, this essay will deal with accounting rules, not with the question of how far those rules are complied with or to what extent accountants go beyond the official requirements.

The scope of the topic will be confined to accounts of *companies* only. Emphasis is put on individual accounts. Group accounts will be discussed in a separate section. It will be shown that in group accounts, the problem of the influence of tax rules usually does not arise (it is rather the accounting for deferred taxes that is of interest in group accounts), and therefore group accounts are more or less free from such influence. If, however, such influence prevails, the legal basis for it and problems connected with it are the same as for individual accounts (Pfaff/Schröer, 1996). The reason for dealing with companies only, and not dealing with partnerships lies in the fact that the fourth EC directive is confined to companies[2]. As a result, financial statements of partnerships are dealt with to a limited extent only in the national accounting order, which causes problems for comparison. Moreover, financial statements of partnerships generally have limited practical importance in terms of information for external users and European (international) comparability.

## TAXATION AND ACCOUNTING

Accounting systems, as well as taxation systems, are both faced with a need to assess facts essential for the determination of the asset position and, above all, of the operating results. The economic results of an enterprise are thus necessary for two different purposes:

- For taxation, in order to tax according to the capacity of the enterprise, and
- For information for report users.

Since both financial reporting and taxation have the need for economic results in common, it seems reasonable to connect the two systems in a way that allows reference from one system to the other.

Even though both systems have the need to report economic results, it has to be borne in mind that taxation and financial reporting follow very distinct objectives. Financial reporting provides information for report users and documentation for the enterprise itself. This involves a certain measure of judgment, a certain flexibility in the assessment of the enterprise's affairs, subject to accounting rules and the scrutiny of the auditor, in order to provide a "true and fair view." In contrast, taxation is guided by the interest of equal treatment of all taxpayers. Thus, flexibility cannot be allowed to the same extent; uniformity is necessary to provide a reliable basis for tax assessment. In addition, taxation is a means of economic policy. Tax rules promoting policy objectives may substantially deviate from the "true and fair view" concept of financial reporting.

In addition to the different degrees of flexibility, the approach to financial and tax reporting is different in another respect. Company law should avoid the possibility of creditors and shareholders being given a false impression of security. Tax law tries to define a profit which cannot be fraudulently reduced in order to avoid tax. "In other words, tax law seeks to ensure that the accounts are not too pessimistic, and company law that they are not too optimistic." (Puyraveau/Descottes-Genon, quoted by Scheid/Walton, 1992). These different objectives of the two systems are a major impediment to connecting accounting and

taxation. In general, in Europe two different approaches to the relation between tax accounts and financial accounts are represented (see similar OECD, 1987):

> *Accounting rules and fiscal (tax) rules are independent of one another;* they do not interact. Financial reports are drawn up according to accounting standards while tax reports are drawn up outside of the accounting framework, independent of the assessment and valuation in accounting. An approach tending to separate the two fields can be found mostly in Anglo-American countries (outside the EC: Australia, Canada, United States, New Zealand; see OECD, 1987). With respect to the EC, the UK, Ireland, the Netherlands, and Denmark can be identified (Gail/Greth/Schumann, 1991). Denmark decided to separate financial and fiscal reporting on the occasion of the implementation of the fourth EC company law directive on annual accounts (OECD, 1987; Krieger, 1988; van der Tas, 1992).

> *Taxation depends on financial reporting;* all entries in the books are relevant for taxation. This approach, which leads to more or less strong interaction between the two fields, can be found in Germany, France, and in most of the other EC member states (Austria, Belgium, Finland, France, Germany, Greece, Italy, Luxembourg, Portugal, Spain, Sweden; see OECD, 1987; Gail/Greth/Schumann, 1991). However, since taxation cannot allow the same degree of flexibility that is necessary for financial reporting, usually some amendments (e.g., depreciation, provisions) to the profit and loss account have to be made by arithmetical reconciliation outside of the accounts.

The fact that taxation depends on financial reporting can lead to the reverse effect, namely the influence of tax rules on financial accounting. First, the taxpayer, knowing that entries in the books are relevant for taxation, might tend to understate his profits and exaggerate his expenses, in order to minimize taxation. Companies are inclined to choose their accounting methods with an eye to tax implications. (Groh, 1996; Schneider, 1970; Henscheid, 1992) This, however, is subject to the company objective with regard to accounting. Firms may be willing to pay a higher tax if it means showing a greater profit and, in turn, enhancing their position to generate more capital.

Second, in order to minimize the workload of the arithmetical reconciliation for tax purposes, the company might ignore, e.g., economic depreciation, and instead use the amount provided for by tax law, and thus let tax law prevail over the objective of a true and fair presentation.

Third, in some cases (in particular, tax incentives for investment; deduction of expenses), tax law itself requires that in order to benefit from these tax benefits, tax reporting techniques have to be used in the financial statements. In other words, aid for investment and/or tax-deductibility of expenses depends on the entry in the commercial accounts. It is essential to realize that the influence of tax rules on financial accounting is a consequence of the fact that taxation depends on financial reporting (see Figure 1).

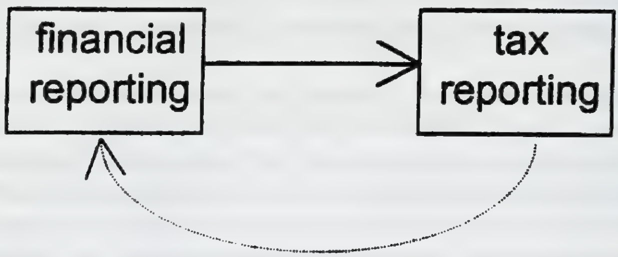


**Figure 1.** The Connection Between Tax Reporting and Financial Reporting

## THE INFLUENCE OF TAX RULES ON FINANCIAL REPORTING

In the following sections, a closer examination of the influence of tax rules on financial accounting is presented. First, the fourth EC directive and the relevant provisions are discussed. Then the influence of tax laws on financial reporting in Germany, France and the UK are examined.

### Fourth EC Company Law Directive

The fourth EC company law directive on annual accounts does not take a position for or against the separation of the accounting and the tax systems (Niessen, 1992; Krieger, 1988; McCourt/Radcliffe, 1995). The Commission of the EC first opposed the influence of tax rules on accounting (supported by Ireland, the Netherlands and the UK), since the true and fair view requirement would be jeopardized. Other countries that allowed such influence at the time were willing to give up that connection (e.g., Belgium, France, Italy, Luxemburg); only Germany was determined to support and maintain the dependence of the tax system on the accounting system. In the end, the argument that the implementation of the fourth directive should not lead to additional tax burdens of German companies led to the provisions mentioned below (Krieger, 1988). The directive accepts such influence of tax rules as long as the requested information is disclosed and the true and fair view is guaranteed. At the present, only Denmark, Ireland, the Netherlands and the UK completely separate taxation from financial reporting (Gail/Greth/Schumann, 1991).

In general, the directive treats financial reporting as being independent from tax reporting. But since the directive requires that companies must indicate in their notes on the accounts deviations made for tax purposes in certain cases, it can be assumed that the influence of tax rules on financial reporting is acceptable in the cases indicated below, as long as it is explained (Kloos, 1993; Niessen, 1992).

In detail, the fourth directive refers to the influence of tax provisions only in the following articles: Art. 35(1) d), Art. 39(1) e), and Art. 43(1)(10). Art. 35(1) d) states that "if *fixed assets* are the subject of exceptional value adjustments for taxation purposes alone, the amount of the adjustments and the reasons for making them shall be indicated in the notes on the accounts." According to Art. 39(1) e), the very same information has to be provided in case of exceptional value adjustments of *current assets* for taxation purposes alone.[3]

This kind of deviation from normal valuation rules can only be justified in those countries and in those cases where tax law compels companies to apply fiscal valuation in their annual accounts (Commission of the European Communities, Contact Committee, 1990; van Hulle/van der Tas, 1995).

While the two provisions above refer to the balance sheet, Art. 43(1)(10) refers to the profit and loss account. It states that information has to be set out in the notes in respect of the extent to which the calculation of the profit or loss has been affected by a valuation which was made with a view to obtaining *tax relief.* Where the influence of such a valuation on future tax charges is material, details must be disclosed.

## Germany

### *Relationship Between Financial Reporting and Taxation*

German financial reporting, which is codified in the German Commercial Code is still, notwithstanding the implementation of the fourth EC directive, characterized

- By the predominance of the principle of prudence[4]
- By the fact that the true and fair view requirement is not the overriding principle (Macharzina/Langer, 1991; Haller, 1992b); thus, deviation from the detailed accounting rules is not admissible, the expectation being that compliance with legal accounting requirements ensures a true and fair presentation. In case of doubt, extra information is disclosed in the notes (Nobes, 1993; Seckler, 1995; Macharzina/Langer, 1991)
- By a reserved attitude towards information and publicity[5]
- By the large influence of tax rules (Seckler, 1995; Macharzina/Langer, 1991).

The relationship between financial accounting and taxation is characterized by the German term *Maßgeblichkeitsprinzip*, a word which has been translated into the English language as "authoritative principle" (Macharzina/Langer, 1991; Seckler, 1995; Pfaff/Schröer, 1996; other translations: "congruence principle," Walton, 1995, and Haller, 1992b; also: "principle of decisiveness," McCourt/Radcliffe, 1995). It indicates a very strong link, indeed the strongest within the EC (van der Tas, 1992; Kloos, 1993; Haller, 1992b), between the financial and tax report. Very similar to the German is the Austrian approach.

The *Maßgeblichkeitsprinzip*, being incorporated in tax law, is one of the cornerstones (*"Eckpfeiler,"* Küting, 1989; Herzig, 1995; Haller, 1992b; Haeger, 1989) not only of income and corporate taxation, but also of financial reporting. Its historic roots lie in the income tax laws of the countries (*Länder*) of Sachsen and Bremen of 1874 (Haller, 1992a; Haller, 1992b; Pfaff/Schröer, 1996). For the first time taxation was connected to the books which had to be kept according to commercial law. In the following years, other countries followed, in particular Prussia with the 1891 Income Tax Act. In 1934, the principle was incorporated in § 5 of the Income Tax Act.

The *Maßgeblichkeitsprinzip* still can be found in § 5 (1) of the Income Tax Act (*Einkommensteuergesetz*). It determines the taxable income of traders that draw up annual accounts (including companies) as defined according to the required accounting principles

(*Grundsätze ordnungsmäßiger Buchführung*[6]). § 5 (1) further states that *fiscal options for the determination of taxable profit must be exercised in conformity with the commercial balance sheet.* The authoritative principle is *not* a *general* rule requiring expenses to be included in the financial statement in order to be tax deductible (although this is often the case for specific regulations). It rather states that in case the same option exists in the financial reporting requirements and in the tax requirements, the choice made in the financial report is normative for the tax report, *unless tax law provides otherwise* (van der Tas, 1992).

Only in cases where tax law prescribes mandatory rules (no options for the taxpayer) which deviate from mandatory accounting practices applied in the financial report, the accounting practices chosen for financial reporting must be departed from in order to meet the tax requirements. Tax law requires specific treatment which differs from commercial accounting only in a few specific cases, e.g., tax law provides for stricter depreciation requirements or the amount deductible for pension plans is less in the tax report than in the financial report (Haller, 1992b).

*Maßgeblichkeit* has been interpreted by extensive academic discussion and detailed jurisdiction of the Federal Fiscal Court (*Bundesfinanzhof* the highest court in fiscal matters, Pfaff/Schroer, 1996; Walton, 1995; Haeger, 1989; Siepe, 1993) in such a way that, whatever accounting practice, and thus, whatever *concrete value* has been chosen for the purpose of the annual accounts actually drawn up, is authoritative for taxation (*formelle Maßgeblichkeit*: the concrete value is authoritative), except in those (few) cases where tax law has mandatory rules itself. Tax accounts (balance sheets) do not represent an independent set of accounts but are derived from the commercial accounts (Seckler, 1995). It has to be mentioned that tax law in Germany provides for companies not only to calculate the taxable income, but to draw up a complete balance sheet for tax *purposes* only. Since tax law defines profit as the difference between net assets at the end of the year and the net assets at the end of the previous year, the valuation of items in the balance sheet is of great interest to the tax authorities (AlNajjar/Volz, 1991; Haller, 1992b).

As already described in the introduction, the fact that financial reporting is relevant for taxation, leads as a direct and logical consequence to the *umgekehrte Maßgeblichkeit*, the *reversal* of the authoritative nature of financial statements for tax accounts. The *umgekehrte Maßgeblichkeit* describes the retroactive effect of tax computation on financial statements. Where the accounting treatment in the financial statements directly affects the tax position of the company, it leads to a subordination of accounting policy to tax considerations (McCourt/Radcliffe, 1995; Seckler, 1995; also named "financial conformity"). The reverse *Maßgeblichkeit*, which has previously been in doubt, was expressly determined by an amendment of § 5 (1) Income Tax Act in 1990.

The reversal of the authoritative principle is relevant in two areas (Raupach, 1990; Haeger, 1989):

a. In cases where "normal" options of accounting practices and valuation according to the required accounting principles are involved, and
b. In cases where options concerning tax incentives for investment contradict the required accounting principles.

*Case a:* Whenever the required accounting principles offer an option, the taxpayer, trying to minimize taxation, will apply appropriate accounting practices. As a result, German companies are compelled to evaluate their assets at the lowest amount possible and their liabilities (in particular provisions) at the highest amount possible under the required accounting principles in the financial statements, which leads to an understatement of profits, in order to minimize the tax burden (Seckler, 1995; van der Tas, 1992). This sort of understatement does not cause any difficulties in German financial reporting, as long as it is not arbitrary, keeping in mind the importance of prudence.

*Case b:* This kind of reverse *Maßgeblichkeit* is of particular interest: tax law provides an option to deduct expenses, in particular to promote investment. In order to benefit from this option, the same option must be accounted for in the financial report, even though it contradicts accounting principles (van der Tas, 1992). A purely tax motivated deduction thus will be found in the commercial accounts. Tax law overrides the required accounting principles and the true and fair view requirement.

Reverse *Maßgeblichkeit* applies in cases where tax law serves objectives of economic policy, such as the promotion of investment. Some examples include *untaxed reserves,* and *special tax depreciation allowances.* Tax law requires these rules to be accounted for in financial reporting. In addition, there are cases in which certain accounting methods are not applied in order to avoid additional taxes (governed by the objective of tax-neutrality of the implementation of the fourth directive). One particular case is the fact that *writing up* an asset is optional, instead of mandatory. Each of these items is discussed in the next section.

### *Influence of Tax Provisions on Financial Reporting*

The *reason* for applying the reverse authoritative principle is the reduction of distributable commercial profit (Haller, 1992b; Kloos, 1993). In Germany, according to the Stock Company Law (*Aktiengesetz*), only the commercial profit according to financial reporting (profit and loss statement of the individual accounts) is available for distribution. The shareholders decide which parts of the profit shall be distributed, and which parts shall strengthen the companies' capital base. Via the application of the reverse authoritative principle, the distributable profit is being reduced. Those parts of profit that are temporarily exempted from tax are also temporarily unavailable for distribution purposes (Pfaff/Schröer, 1996; Haller, 1992a). Companies shall be forced to actually reinvest the untaxed parts of their profits, instead of distributing them, since, in most cases, tax relief is granted in order to promote investment.

As mentioned above, companies are required draw up a separate tax balance sheet. However, in order to minimize the workload of the arithmetical reconciliation for tax purposes, most companies, in particular small and medium-sized companies (more that 90% of the limited liability companies (*GmbH*), Haller, 1992b), draw up only one balance sheet which serves for financial reporting as well as for taxation, and which thus meets all tax requirements (*Einheitsbilanz*, Küting, 1993). Formally, the principle that tax reporting is dependent on financial reporting is followed; however, *de facto* it is just the opposite. The fact that just one balance sheet has to be drawn up is often mentioned as an advantage of *Maßgeblichkeit* for companies (Haller, 1992b).

In general, financial reporting has to comply with the required accounting principles and with the true and fair view requirement. To legalize accounting practices which contradict

the required accounting principles, commercial law itself allows the incongruity between tax reporting and financial reporting through special rules for untaxed reserves, special tax-driven depreciation, and write-up of assets. (§ 247(3), § 254, § 273, § 279(2), § 280(2), and § 281 of the Commercial Code. § 281(2) and § 285 Nr.5 of the Commercial Code provide for the necessary information in the notes on the accounts.)

### Untaxed Reserves

It is admissible to account for untaxed parts of the profit in the balance sheet. This item, which is named "*Sonderposten mit Rücklageanteil,*" translated this means "special item with an equity element" (§ 247(3), § 273, § 281 Commercial Code), has to be reported between equity and provisions on the liabilities side of the balance sheet.[7]

The reserves remain untaxed according to tax law. However, they are only temporarily sheltered from taxation. Consequently they are not "normal" reserves (retained earnings), and they are reported separately. In particular capital gains from the disposal of fixed and financial assets are reported here. Their taxation is postponed if a qualifying reinvestment takes place.

In its character the *Sonderposten mit Rücklageanteil* is partly equity (reserve, retained earnings) and partly liability (deferred taxation), since tax might still arise (Tietze, 1995; Seckler, 1995). To be tax-deductible, the reserves have to be passed through the profit and loss account; they have to be reported as extraordinary expenses. According to § 281(2) Commercial Code, adjustments in the amount of this item must either be reported separately in the profit and loss account, or disclosed in the notes.

### Special Tax-Driven Depreciation

The special depreciation of *fixed assets* (not current assets) according to tax law leads to a value which is below the economic value of the asset. There are two possible ways of reporting: either the tax-driven depreciation is deducted directly from the asset value, or a value adjustment (contra asset) on the liabilities side of the balance sheet is reported.

A *value adjustment* is the difference between the economic depreciation and the higher tax-driven depreciation that is reported on the liabilities side. The appropriate item again is the *Sonderposten mit Rücklageanteil.* Thus, this *Sonderposten* is composed of two items of a very different nature: untaxed reserves and value adjustments. In consequence, the value of the assets shown on the asset side is the just value according to the required accounting principles. Additional information, on the extent to which the calculation of the profit or loss has been affected, has to be disclosed in the notes (§ 285 Nr.5 Commercial Code, transformation of Art. 43(1)(10) of the directive).

However, although this way of accounting reveals the influence of tax provisions and thus helps to provide a true and fair view, it is not compulsory. Companies are also allowed to *deduct* special tax-induced depreciation *directly from the asset value.* The value of fixed as well as current assets may be written down (in addition to the "normal" depreciation according to the required accounting principles) to the value admissible according to tax law (§ 254, § 279(2) Commercial Code). In consequence,

the written-down value of assets appearing on the face of the balance sheet does not correspond to written-down asset values arrived at by applying normal accounting principles.

It is apparent that the two different possibilities lead to a very different view of the company's position, especially when the second accounting practice presents a view which is far from being true and fair. However, it is exactly this (second) accounting practice that Art. 35(1) d) and Art. 39(1) e) of the fourth directive provide.

For both ways of accounting, additional information on the extent to which the calculation of the profit or loss has been affected (§ 285 Nr.5 Commercial Code, transformation of Art. 43(1)(10) of the directive), and on the the amount of the tax induced adjustments and the reasons for making them (§ 281(2) Commercial Code) must be disclosed in the notes.

### *Write Up (§ 280(2) Commercial Code*

Art. 35 (1) c) dd) (for fixed assets) and Art. 39 (1) d) (for current assets) of the fourth directive provide that valuation at the lower value that was attributed to the asset in earlier years, may not be continued if the reasons for which the assets were written down have ceased to apply. In other words, companies, having written down an asset before, are required to write up again under these circumstances. Thus, the building up of hidden reserves is prevented.

Writing up, of course, leads to an increase in profits. In Germany, due to the principle of *Maßgeblichkeit*, in most cases the amount written up would be taxed. In principle, the obligation to write up is codified in § 280(1) of the German Commercial Code. However, § 280(2) provides that the company may retain the lower value in order to avoid the additional taxation of the amount written up. This retention option leads to an incorrect transformation of the directive.[8] Considerable possibilities for the creation of hidden reserves are thus available, leaving large areas of latitude to the companies.

Additional information on the amount that had been omitted from the write up in the respective year (§ 280(3) Commercial Code), and on the extent to which the calculation of the profit or loss has been affected (§ 285 Nr.5 Commercial Code, transformation of Art. 43(1)(10) of the directive) has to be disclosed in the notes. However, this information is contained in the notes of the respective year only (in which the company could have written up), not in the notes of later years, in which the asset value is still too low. Thus, the considerable distortion of the true and fair view is not compensated for by additional information.[9]

The incorrect transformation of this provision in particular is governed by the policy the German legislators followed when transforming the fourth EC-directive. As already mentioned, Germany was not willing to give up the principle of *Maßgeblichkeit*. Moreover, through the transformation of the directive into German law, companies should not have to endure any additional tax burdens that might have arisen (e.g., through the fact that certain hidden reserves were no longer admissible).[10]

For the very same reason (no additional tax burden), not only was the write up made *de facto* optional, but also several other options of the directive were not applied (e.g., the valuation at fair values, the valuation of investments at equity, and the capitalization of

research and development costs are prohibited, Haller, 1992b). All these accounting practices would lead to an increase of profit and consequently of tax. The prohibition of these accounting practices also can be seen as an influence of taxation on commercial accounting. However, these are options of the directive, and thus the lack of comparability of financial statements of different countries is due to differences in the transformation of the option in the first place, and only in the second place due to the influence of tax provisions on the annual account.

## *Criticism*

From the above discussion, major distorting effects (Küting, 1993; van der Tas, 1992; Kloos, 1993; Siepe, 1993) of the reversal of the *Maßgeblichkeit* and the respective accounting law in Germany can be detected: The valuation of assets is likely determined by taxation, leading to amounts reported on the asset side of the balance sheet (possibly far) beneath the amount appropriate to accounting principles.[11] Even though information on this matter can be obtained from the notes, the balance sheet does not give a true and fair view of the assets. Also, when reported on the liabilities side of the balance sheet, the profit and loss account does not give a true and fair view, although this is again explained in the notes (Laupenmühlen/Voß, 1994; Rost, 1991).

Additionally, the value of the assets reported in the balance sheet can be beneath the appropriate value because the lower valuation may be continued, even though the reasons for which the value adjustment was made may have ceased to apply. Information on this matter can be obtained from the notes only for a limited time; only in the year in which the company could have increased the value does the amount have to be disclosed. In later years, the disclosure of the hidden reserves is not required (Haller, 1992a).

Also, the fact that untaxed reserves, in order to be tax-deductible, have to be passed through the profit and loss account as extraordinary expenses, leads to a distorted measurement of profit.

It can be seen that in addition to the prevailing principle of prudence, which itself allows undervaluation of assets and overvaluation of liabilities (in particular provisions) to a certain extent, the reversal of the principle of *Maßgeblichkeit* leads to additional undervaluation of assets and to hidden reserves.

The reverse *Maßgeblichkeit* has been heavily criticized in German academic writing (For a list of such literature see Raupach (1990), 519, footnote 21; Haller (1992b), 311, 321; Rost (1991), 190; Haeger (1989), 1, 329; Siepe (1993), 121). It leads to non-compliance with required accounting principles, with the true and fair view (Haeger, 1989), and—in some cases[12]—with the fourth directive. In addition, the justification for the reverse *Maßgeblichkeit* (prevention of distribution), is valid for companies only, not for partnerships. It is thus suggested that this poses a problem of constitutional law, in particular of equality (Raupach, 1990; Siepe, 1993; Haller, 1992a). Also, with a view to the proceeding internationalization of accounting and the increasing influence of Anglo-Saxon conceptions in Germany, it is thus often demanded that Germany should give up the reverse *Maßgeblichkeit*, which can lead to a deliberate distortion of the accounts (Küting, 1993; van der Tas, 1992; Siepe, 1993).

## France

### *Relationship Between Financial Reporting and Taxation*

French financial reporting, based on the French Commercial Code and the *Plan Comptable Général* (PCG), is very similar to German accounting. A first PCG was published in 1943, although it was never applied; it was strongly influenced by German models.[13] Following the liberation of France the "1942 *Plan*" was revised in 1947, and subsequently in 1957, 1982, and in 1986. Its concept has remained the same up to the present day.

As in the case of Germany, there is a connection between taxation and annual reporting. However, this connection is not the result of a fundamental concept underlying the idea of taxation and accounting (Altmeier et al., 1994). It is rather the result of specific tax rules requiring equivalent accounting in financial reporting (Laupenmühlen/Voß, 1994; Klee, 1992).

The *historic development* of the relationship between taxation and accounting is characterized by a long absence of specific accounting legislation and of the weak position of the accounting profession (Frydlender/Pham, 1996). French tax law gave the first legal definition of taxable profit in 1917 (Scheid/Walton, 1992). It was only in 1943 that the PCG gave a vague definition of company profit, and only in 1967 that company law gave a "real" definition of the term. From 1917 until the mid-sixties, tax law filled the gap. In the absence of regulations in company law, tax law intervened without regard to either accounting theory or existing accounting practices (Scheid/Walton, 1992; Frydlender/Pham, 1996; Fortin, 1991; McCourt/Radcliffe, 1995; Forszpaniak/Scholtissek, 1985). This intervention was made easier by the weak position of the accounting profession, which started to play a role in the formation of accounting standards only after 1965 (Scheid/Walton, 1992). It can be said that until the implementation of the fourth directive, financial reporting in France was guided by tax rules.

A tax decree, which is still in force, requires companies from 1965 on to file tax returns which are based on the formats and rules of the PCG (Scheid/Walton, 1992; Scheid/Walton, 1995; Griziaux, 1995; Filios, 1987). The tax code requires that "businesses should follow the definitions set out in the PCG, provided that these are not incompatible with the rules applicable to the calculation of taxable profit."[14] However, it is suggested that this rule does not establish a clear rule of tax conformity.[15] When tax rules differ from accounting rules, the taxable profit has to be calculated, starting from the accounting profit, on forms (*tableau de passage*) attached to the balance sheet and the profit and loss account. No separate balance sheet for tax purposes is drawn up. (Memento Practique Francis Lefebvre Comptable, 1988; Scheid/Walton, 1992; Gambier, 1987; Forszpaniak/Scholtissek, 1985; Griziaux, 1995). For this reason, the difference between commercial profit and taxable profit is known as "*l´autonomie du droit fiscal*" (autonomy of fiscal law). This concept emphasizes the fact that certain tax rules differ from company law and thus commercial profit is always different from taxable profit (Gambier, 1987; Baconnier, 1994). Nevertheless, in general, accounting principles for commercial accounts are applicable for tax calculations (Baydoun, 1995); thus, taxation is influenced by accounting.

In contrast, as a consequence of the strong influence of taxation on accounting until the 1960s, tax law requires, as a general rule, *tax deductible expenses* to be (already) deducted *in accounting* as well, otherwise no tax benefit can be obtained (Scheid/Walton, 1995;

Standish, 1991; Forszpaniak/Scholtissek, 1985; van der Tas, 1992). By thus imposing controls upon the construction of the balance sheet, the law-maker avoids "to see the fiscal interests of the state chained to the uncertain outcomes of a fertile accounting imagination." (Standish, 1991) In particular, depreciation which is determined largely by tax rules[16] must be written into the accounts (Scheid/Walton, 1992; Walton, 1995; Baydoun, 1995; McCourt/Radcliffe, 1995; Standish, 1991; Baconnier, 1994; Laupenmühlen/Voß, 1994). Also provisions, *provisions réglementées*, and research expenditures must be accounted for in the financial statement according to tax law in order to be tax deductible (*Code Général des Impôts*, Art. 39-1; Art. 236-1). This, of course, does not preclude tax authorities from excluding certain expenditures accounted for in the financial statement from being tax deductible.

However, in contrast to Germany, no separate balance sheet for tax purposes has to be drawn up. Nevertheless, as in Germany, the valuation of the items in the balance sheet is of great importance. Taxable profit is defined as the difference between the value of net assets at the beginning and end of the period. In principle, changes in balance sheet asset values lead to tax consequences (McCourt/Radcliffe, 1995).

As a result, it can be said that in France there is a strong influence of tax rules on financial reporting. Unlike in Germany, this influence is not the logical result of a notion comparable to *Maßgeblichkeit*, but just the result of specific tax rules providing for the inclusion of expenses in the profit and loss account (Küting/Weber, 1994; Laupenmühlen/Voß, 1994). While the concept of *Maßgeblichkeit* and its reversal in Germany cause considerable dogmatic discussion, such problems are unknown in France (Tillmanns, 1995).

### *Influence of Tax Provisions on Financial Reporting*

In the following discussion it can be seen that in those cases where tax rules find their way into French accounting, the French rules are very similar to the German rules. Provisions réglementées [PCR (Plan Comptable Revisioné) 1982, compte 14, II.24]: French accounting law provides for "regulated provisions" that are reported on the liabilities side of the balance sheet as the last item within the equity, and are considered as part of the reserves (Memento Practique Francis Lefevre Comptable, 1988; Keun/Scherler/Strothotte, 1993; Scheid/Walton, 1992; Lefebvre/Pöllath/Rädler, 1976; Gambier, 1987; Griziaux, 1995; Klee, 1992). In spite of the term "provision," they are reserves which have been temporarily sheltered from taxation. The *provisions réglementées* are required to secure tax relief, but are not justified by reference to accounting principles (McCourt/Radcliffe, 1995). In their content, they are very similar to the German equivalent, the *Sonderposten mit Rücklagenateil* (Forszpaniak/Scholtissek, 1985). For analytical purposes, they are part equity and part deferred taxation. As in Germany, adjustments in the *provisions réglementées* have to be accounted for in the profit and loss account within the extraordinary items (PCR 1982, I.88, II.52; Memento Practique Francis Lefevre Comptable, 1988; Griziaux, 1995; Klee, 1992). The *provisions réglementées* comprise two parts (Keun/Scherler/Strothotte, 1993; PCR) 1982, comptes 142 - 148):

a. *Reserves* that remain temporarily *untaxed* for reasons of economic policy. Some examples include the provision for inflationary increases in stock, for outstanding foreign currency items, for market fluctuation, for the construction of buildings used

for research and development, for the purchase of assets used to combat water and air pollution, and for establishments abroad (Griziaux, 1995; Scheid/Walton, 1992; Frings, 1994; Forszpaniak/Scholtissek, 1985). The use of tax allowances as an arm of economic policy has remained until now a permanent element of French economic management.

b. The difference between the (higher) depreciation that is admissible according to tax rules and the (lower) economic depreciation of fixed assets, i.e., tax-accelerated depreciation (Griziaux, 1995; PCR 1982, I.20). It has already been said that expenses (including the total *tax driven depreciation*) have to be accounted for in the financial statement in order to be tax-deductible. The excess of tax-deductible depreciation (*amortissements dérogatoires*) over economic depreciation is thus not deducted directly from the asset but is shown as a *provision réglementée*, as a *value adjustment* (PCR 1982, I.20, I.63, II.32; Teller, 1984-2; Memento Pratique Francis Lefebvre Fiscal, 1987; Standish, 1991; Frings, 1994; Schwandtner, 1994; Forszpaniak/Scholtissek, 1985). The accounting for tax-induced depreciation as a value adjustment on the liabilities side is mandatory, in contrast to Germany the value of the asset may not be written down directly in French accounts.

Concerning the *notes* on the accounts, Art. 24 of the 1983 Accounting Decree mandates that the methods which have been used as a result of tax regulations to calculate depreciation must be disclosed and separately identified (Art. 24 § 2 of the decree). Thus, the requirement of Art. 35(1)d) of the directive, according to which tax-driven value adjustments must be disclosed, is fulfilled. Furthermore, the effect of tax considerations on profit and loss according to Art. 43 Nr.10 of the directive have to be disclosed (Art. 24 § 23 of the decree).

## Comparison Germany—France

Though both countries have similarities in the actual effects of taxation on accounting, it should be stressed that their historic development differs. In Germany financial reporting is authoritative for taxation, which leads to a reverse influence of taxation on financial reporting, a fact which is rooted in the fiscal laws of the late 19th century. On the other hand, in France the absence of detailed accounting rules until the middle of this century led to fiscal law filling the gap.

Both countries have considerable similarities concerning the influence of tax rules on company accounts. Nevertheless, differences can be detected. The distinctions between France and Germany can now be discussed in detail, which will facilitate an understanding of the approach of the two countries. It will then be appropriate to set the UK approach in contrast with the "continental" approach.

In both Germany and France, company profits and tax profits differ only slightly[17] or not at all[18]; they are calculated in both countries in basically the same way. Thus, unlike in the case of the Anglo-Saxon systems, the problem of deferred taxes[19] is almost non-existent.[20]

In *Germany* the influence of tax provisions on company accounts is the result of a basic principle underlying taxation and accounting, the principle of *Maßgeblichkeit* according to which the concrete values of the financial statement are authoritative for taxation. As a log-

**Table 1.** Comparison Germany—France

| *Fourth EC-directive* | *Germany* | *France* |
|---|---|---|
| **Art. 35(1) d),**<br>**Art. 39(1) e)** | | |
| —value adjustments for taxation purposes alone | admissible, two possibilities:<br>1. value adjustment shown on liabilities side (*Sonderposten mit Rücklageanteil*, between equity and provisions) | admissible:<br>value adjustment shown on liabilities side (*provisions réglementées*, within equity/reserves) |
| | 2. value adjustment deducted directly from the amount shown on the assets side | — |
| —information on amount and reasons in the notes | required, for both of the possibilities above | required |
| — | untaxed reserves shown separately on the liabilities side of the balance sheet (*Sonderposten mit Rücklageanteil*) | untaxed reserves shown separately on the liabilities side of the balance sheet (*provisions réglementées*) |
| — | Changes in the amount of the *Sonderposten mit Rücklageanteil* must either be shown separately in the profit and loss account, or information on the amount must be disclosed in the notes | |
| — | writing up of assets de facto not compulsory<br><br>information on the amount that could have been written up but was not in the notes required | |
| **Art. 43(1)(10)** | | |
| —affect of the calculation of profit/loss by valuation with a view to tax relief | required,<br>for all tax-induced accounting practices mentioned above | required |

ical consequence this leads to its reversal (which is provided for in commercial law) and thus to the influence of tax rules on the financial statement. Even so, there is no general requirement, as there is in France that expenses have to be accounted for in the financial statement in order to be tax deductible (although this usually is the case). For the purpose of taxation the company has to draw up a separate statement. Very often, companies choose to draw up only one statement which satisfies tax rules as well as commercial rules in order to facilitate accounting.

The approach in *France* is rather pragmatic. The French company does not draw up a separate statement, instead the commercial profit is adjusted for the measurement of the

taxable income. The influence of tax rules on the commercial accounts is the result of the rule in tax law requiring expenses to be accounted for in the commercial accounts in order to obtain tax benefits, and has its origins in the long absence of accounting regulations.

Comparing the several rules with respect to tax influence in detail in Table 1, one can easily see that both countries have inserted an item on the liabilities side of the balance sheet with similar content: untaxed reserves/provisions on the one hand and tax-driven value adjustments on the other.

Concentrating on the balance sheet (not on the notes), one can see that the influence of taxation is much stronger and more disguised in Germany. Tax-driven depreciation may be deducted directly from the asset value, and assets that have been written down in earlier years for economic reasons need not be (and usually actually are not) written up again once the reason for their creation has ceased to apply. This can lead to considerable tax-induced undervaluation of the assets in Germany, while in France the influence of taxation is always identifiable—at least to a certain extent.

But even when the influence of taxation is less disguised, by showing untaxed reserves and tax driven value adjustments on the liabilities side of the balance sheet (*Sonderposten mit Rücklageanteil; provisions réglementées*), all adjustments of these items still go through the profit and loss account. Although the adjustments are reported as extraordinary items, they still lead to a distorted measurement of profit (Puyraveau/Descottes-Genon, quoted by Scheid/Walton, 1992).

Of course, accounting law provides for the necessary information in the notes on the accounts; however, it is suggested that information in the notes is "secondary" in that respect. Apart from the fact that often (especially in Germany) the notes are not fully published (if at all[21]), the first impression of a company's situation is always based on the balance sheet and the profit and loss statement. It is thus appropriate to give all the material information, if possible, on the face of the balance sheet.

## United Kingdom

### *Relationship Between Financial Reporting and Taxation*

In the United Kingdom, as in Anglo-American countries in general, accounting is not influenced by tax rules.[22] The measurements used in financial reporting are generally not binding for tax purposes and expenses do not have to be reported in financial accounting in order to be allowed for fiscal purposes (McCourt/Radcliffe, 1995; Bastian/Beaujean, 1994; Küting/Weber, 1994; Mumford, 1995; Gordon/Gray, 1994; Lamb, 1996; Frings, 1994; van der Tas, 1992; Cooke/Olusegun Wallace, 1995). The definition of taxable profit is mainly based on case law, and to a lesser extent on detailed codified tax law. It is not based on company law (Walton, 1995).

One of the main reasons for this very different approach as compared to France and Germany lies in the fact that in Britain, income taxation had been in existence long before annual reporting appeared (Walton, 1995; Mumford, 1995; Lamb, 1996). Income tax was first introduced in the UK in 1799, and reformed substantially in 1803. Corporation tax was introduced later, but it is based on the tax rules of the 1803 Act for unincorporated business under Schedule D. The first accounting rules appeared only in 1844, and were directly

related to the establishment of limited liability companies. Accounting developed further in the second half of the nineteenth century. When income tax was being elaborated, no set of accounting rules to refer to was established (Walton, 1995). Thus, a separate tradition had been created.[23]

In continental Europe, the situation was reversed. In France, accounting appeared already in the *Ordonnance de Commerce* of 1673, known as the *Savary* law, and accounting rules were incorporated into the Napoleonic Commercial Code of 1807 (Scheid/Walton, 1995; Griziaux, 1995; Walton, 1995; Most, 1984). In 1862, following the example of France, the duty of bookkeeping and annual accounting was codified in the German Commercial Code (Krieger, 1988). Taxation was introduced later: in France it was introduced in 1917, and in Germany in 1874,[24] which was also the year in which *Maßgeblichkeit* was first established.

Even though company profits are not binding for tax purposes in the UK, in general, as a result of case law and administrative decisions without detailed statutory guidance, the audited and approved accounts are considered to be the most authoritative and serve as a starting point for calculating the taxable profit (Lamb, 1996; Walton, 1995; Pagan, 1992; Gordon/Gray, 1994).

In recent times, a change in the approach of disconnecting accounting and taxation can be noticed.[25]

> The concern of the court in this connection is to ascertain the true profit of the taxpayer....In so ascertaining the true profit of a trade the court applies the correct principles of the prevailing system of commercial accountancy....At the end of the day the court must determine what is the correct principle of commercial accountancy to be applied. Having done so, it will ascertain the true profit of the trade according to that principle, and the profit so ascertained is the subject of taxation (Pennycuick V-C, Odeon Associated Theatres Ltd v. Jones, 1971, 48 TC 257 at 273).

So, the correct principles of commercial accountancy as determined by the court apply in calculating taxable profits. This is subject, of course, to any specific statutory tax provisions. Recently, these issues have arisen in the cases *Gallagher* and *Britannia Airways.* These cases suggest the court's increasing alignment of tax measurements with generally accepted accounting principles.[26]

***Gallagher v. Jones*** (1993 STC 537, CA): A trader just began his business in hiring out narrowboats. He entered into leasing arrangements for three such boats under which he was required to make substantial initial payments. The accounts treated as expenditure the full amount of the initial payments, and as a result his first accounts showed a substantial trading loss.

The Court of Appeal held that no:

> judge made rule could override the application of a generally accepted rule of commercial accountancy which (a) applied to the situation in question, (b) was not one of two or more rules applicable to the situation in question and (c) was not shown to be inconsistent with the true facts or otherwise inapt to determine the true profits or losses of the business. The law did not enable or require the courts to ascertain the profits of a trade on a basis divorced from the principles of commercial accounting. In the instant case, the principles embodied in SSAPs 2 and 21 satisfied these requirements...[27]

Accordingly, the court held that the profit and loss computation had to be made according to accepted principles of commercial accountancy and not on the basis that distorted the trading results. Thus, the expenditure was to be spread evenly over the period to which it related.

***Johnston v. Britannia Airways Ltd.*** (1994 STC 763): The line of reasoning of *Gallagher* was upheld in this case. The company made provision over the life of its jet engines for major overhaul and refit of the engine which takes place every 17,000 hours (3-4 years), in line with the manufacturer's recommendations. It claims this as a cost of operating the aircraft during the first 17,000 hours, based on the average cost of overhaul per hour flown multiplied by the hours flown of the relevant accounting period, using the accruals method.[28] The Revenue claimed that this should be considered as a cost of using the engine *after* refurbishment, using the capitalize and amortize method,[29] since the refurbishment effectively increased the operating life of the engine. The court found that the company's method of accounting complied with the concept of prudence in SSAP 2 and gave a full and fair picture of the profits. Making a provision thus should be allowed as a deduction *before* refurbishment took place.

These two cases have stressed the importance of ordinary commercial accountancy in computing the profits of a taxpayer (Whitehouse, 1995). Before these two cases, as shown by the quotation above by Pennycuick V-C, the correct principle of commercial accountancy as determined by the court was relevant. Now, the court is willing to determine that correct principle in accordance with the accounting standards.

However, the reference to the above mentioned accounting standards cannot be seen as a wholesale acceptance of the primacy of accounting standards (MacDonald, 1995). The court stated rather the specific circumstances under which income measurement for tax purposes should be based according to the relevant accounting standard.

The cases have caused some irritation about the relation of tax accounting and financial accounting. Acceptance of accounting standards as the appropriate basis for taxation is not widespread in the UK[30] given the different objectives of accounting and taxation. Also recent international and national trends of the Accounting Standards Board, which are taking it away from the "clear, rule based definition of a single 'bottom line' profit figure, which would be ideal as a tax base,"[31] add to this discord.

One of the effects of this line of jurisdiction is that, for purposes of taxation, generally accepted accounting principles become relevant even for those taxpayers for whom the SSAP are not designed (e.g., unincorporated), even though thought to be over-complex by many accountants (Freeman, 1995).

It is important to notice that the reluctance to accept accounting principles as a basis for taxation is also due to a principle of tax law that losses (as well as profits) should not be anticipated. The principle of prudence, important in accounting, is, in contrast to Germany,[32] not accepted in taxation (Freeman, 1995; Broke, 1995). Moreover, it is up to the Inland Revenue to specify the acceptance of the application of accounting standards for tax purposes.[33]

### *Influence of Tax Provisions on Financial Reporting*

It has been shown above that recent case law shows an increasing awareness of accounting standards for tax purposes. However, even though the influence of accounting stan-

dards on taxation is increasing, the reverse effect cannot be detected (Bastian/Beaujean, 1994; Küting/Weber, 1994). The ASB is not formulating its new accounting standards with taxation on its mind (Freeman, 1995). Tax rules providing for expenses being included in the financial statement as a precondition for tax relief, as seen in France and Germany, do not exist.

It is stated in British literature that it is "generally not desirable" to have financial reporting decisions influenced by their potential tax impact. It is a "danger of conformity" when inclusion in financial accounts is a precondition for tax relief (Freeman, 1995). Moreover, it would lead to an increase in legislation and extra-statutory regulation and thus complexity, elements which are unknown to the UK accounting tradition.

It goes without saying that Art. 35(1) d) and Art. 39(1) e) of the fourth directive have not been implemented. Tax-induced valuation of fixed and current assets is unknown (Bastian/Beaujean, 1994; Gordon/Gray, 1994; Küting, 1993; Laupenmühlen/Voß, 1994). For the same reason, Art. 43(1)(10), with respect to the effects on profit/loss, needs no implementation. Of much greater importance than in Germany and France is, of course, the accounting for and disclosure of deferred taxes (Cooke/Olusegun Wallace, 1995).

### Comparison UK—Germany/France

The differences between the UK on the one hand and Germany and France, as representative countries of continental accounting, on the other hand, are obvious. With respect to the influence of financial reporting on taxation, it has been shown that while this relation is, in a more or less flexible way, legally provided for in Germany and France; in the UK such a connection, though in a very loose way, has only recently found its way into UK law by way of case law. In principle, commercial accounting is not binding for taxation.

Thus, the reverse aspect, the influence of tax rules on financial reporting, does not exist in the UK. In Germany, and to a lesser extent in France, financial reporting is heavily influenced by taxation, be it tax driven valuation of assets, or tax driven reserves on the liabilities side of the balance sheet.

To summarize, one can say that current French law and practice may be regarded as a middle ground between the rigid German requirements concerning the principle of *Maßgeblichkeit* and its reversal, and the liberal approach of the English courts which have espoused taxation being based on commercial accounting principles; but, view the reverse influence with disfavour (McCourt/Radcliffe, 1995).

## CONSOLIDATED ACCOUNTS

Consolidated accounts have to be drawn up by large companies according to the implementation laws of the seventh EC-directive in the member states. However, in France and Germany and, of course, in the UK they do *not* have to be in line with tax regulations (Scheid/Walton, 1995; Nobes, 1993). Consolidated accounts cannot be filed for tax purposes in France and Germany. Other forms of group taxation are possible, but they do not depend on the financial consolidated accounts. Companies are free to restate the individual figures, which might be tax driven, for inclusion in group accounts.

The only problem that may remain unsolved in the consolidated accounts is the consolidation of the *Sonderposten mit Rücklageanteil* in Germany, and the *provisions réglementées* in France. In Germany, for consolidation purposes, the *Sonderposten* does not form part of the equity. It can, however, be split up into its two components. The part which represents retained earnings (reserves) is included in the equity, the other part is included in the deferred tax liability. Thus, in German consolidated accounts, the *Sonderposten mit Rücklageanteil* usually cannot be found. In France, all tax induced valuations and items of the individual accounts must not be included in the consolidated accounts (Décret 17 Feb 1986, D 248-6 c). For this reason, the *provisions réglementées* cannot be found in group accounts.

Since consolidated accounts do not serve for tax purposes, they are much more suitable to meet the requirements of information and disclosure. As a consequence, in France and Germany accounting for deferred taxes in group accounts is of greater importance than in the individual accounts.

## CONCLUSION

It is an apparent consequence that, when reporting the same items in the different countries, due to the differences concerning tax-induced accounting, not only the figures of profit differ considerably, but also the debt-equity ratio, the asset ratio, and other ratios (Oestreicher/Spengel, 1997). It is questionable as to how much the notes compensate for these differences.

The distorting effect of the influence of tax provisions on the financial accounts is twofold: distortion of the true and fair view, and distortion of the comparability of financial statements of companies in different countries (Oestreicher/Spengel, 1997).

The adherence of the UK, together with Ireland and the Netherlands, to the separation of the two systems on the one side and Germany to their interdependence on the other side,[34] can be considered a major obstacle to harmonization of accounting throughout the EC.

Disclosure requirements have not resolved the problem of distortion of balance sheet values.[35] Both, German and French accounting law provide for information on tax induced accounting practices in the notes on the accounts according to the requirements of the fourth directive.

The question of whether the statements are comparable and provide a true and fair view depends ultimately on the importance that one is willing to give to the information provided in the notes. In the opinion of the author, as already stated above, this kind of information in the notes usually cannot compensate for the distortion of values in the balance sheet and the profit and loss account. On the other hand, from the legal point of view, it is not really justified to give less importance to the notes, since the notes *together* with the balance sheet and the profit and loss account form the annual accounts.[36] Legally, the notes are of equal rank. Even so, in particular in countries where disclosure has no long tradition (as in Germany or France), the notes are still in a *de facto* subordinate position. Often the notes are not fully published. It is thus appropriate to give as much (material) information as possible in the balance sheet.

*Ruding Committee*:[37] It is surprising to note the opinion of the Ruding Committee, which, in spite of a widespread conviction that the distorting effect of the influence of tax

provisions on financial reporting should lead to a disconnection between financial report and tax report,[38] "recommends the Commission to take appropriate measures to *reduce the differences* between commercial accounts and the accounts used for tax purposes" (emphasis added). It "believes that commercial accounts (...) should form the starting point for the computation of taxable income in all Member States." These statements make the reader believe that a connection between financial and tax reports similar to the French (or German) approach is aimed at. However, "certain corrections made for tax purposes should *not be reflected* in the annual accounts" (all quotes Ruding Report, 1992, emphasis added). The approach chosen by the Committee seems to be a link between accounting and taxation in such way that financial reporting is relevant for the determination of the taxable profit, but no reverse influence of tax rules shall be allowed.[39] This concept seems to be contradicting: a close connection of the two systems asks for the influence of tax rules on annual accounts, to provide for the certainty necessary for the determination of the taxable profit, instead of flexibility. No such influence is desirable having in mind the true and fair view requirement; but, it leads to a separate tax computation that may well be based on financial reporting. That surely does not lead to a reduction of the differences between accounting and taxation. It must be a compromise between the two extremes of the UK and Germany, as explained below, that the Committee had in mind.[40]

Unfortunately the Committee does not provide arguments. It is suggested that competition would be distorted if one (e.g., German) company would have to present a less favorable balance sheet than another (e.g., British) company, in order to obtain the same tax relief, just because the German company is compelled to account for the tax-deductible expenses in its financial statement (Saß, 1993).

Summing up, it can be said that the degree to which tax provisions influence the annual accounts of companies varies in the different Member States. On the one side stands Germany with a very close connection between accounting and taxation, and a strong influence. On the other side stands the UK with a very loose connection and no influence of tax provisions on company accounts while in between stands France. However, the future development even in Germany seems to lead to a less stringent connection between accounting and taxation. Although only in 1990 the reverse *Maßgeblichkeit* was confirmed, from 1997 on, German tax law does not accept provisions for future losses[41] in the tax accounts any longer (§ 5 Abs. 4a Income Tax Act). This constitutes a change of large importance as it denies the principle of prudence for tax purposes. Furthermore in Germany (other Member States were prepared to disconnect the two systems anyway) highly respected academics suggest the abolition of the reverse *Maßgeblichkeit*.[42] In addition, the international pressure increases from outside the EC, in particular from the United States and from the IASC (cooperation with the latter the Commission seeks).

## NOTES

1. For an empirical study on the three countries see Emenyonu/Gray (1992), 49; on Belgium, Denmark, France, Germany, Ireland, the Netherlands, Portugal and the UK see Herrmann/Thomas (1995), 253.
2. Partnerships, limited partnerships and unlimited companies of which all members having unlimited liability are public or private limited liability companies.

3. In a study by the Commission it is stated that all member states allow such exceptional value adjustments, except the UK, Ireland, the Netherlands and Greece. One has to bear in mind though that the new member states Austria, Finland, and Sweden are not included in the study. However, Austrian company law allows such exceptional value adjustments as well.
4. Küting (1993), 37; Nobes (1993), 37; Haller (1992b), 314; Principle of prudence (*Vorsichtsprinzip*): profits must only be accounted for when they have been gained (realized). On the other hand, losses will be considered as soon as they appear possible, but not necessarily probable. The principle of prudence is a result of the worldwide economic crisis of the late 1920s and early 1930s, where the existing accounting practice failed to protect adequateley the creditors of German companies in cases of insolvency. As a consequence it was incorporated in the 1937 Stock Corporation Law (*Aktiengesetz*).
5. Until 1985 the notes on the accounts were more or less meaningless and rather short. This is a result of the role of the banks, which own or control as proxies a majority of shares. The need for published information is less clear, since the banks are "insiders" anyway, traditionally there is not a large number of "outside" private shareholders that wish to control management, Nobes/Parker (1990), 12; AlNajjar/Volz (1991), 105.
6. These principles are relevant for financial reporting. They are partly codified in the Commercial Code, partly they are deducted from the accounting practices of the "proper accountant."
7. Küting/Zündorf (1995), § 280 para. 106; Haller (1992b), 318; Haeger (1989), 227. Although this provision in German law clearly does not correspond to the directive, the German parliament argued that it does (*Bericht des Rechtsausschusses*, printed in Biener/Berneke (1986), 242), saying that Art. 35(1) d) and Art. 39(1) e) provide for the admissability of tax induced value adjustments, a rather extensive interpretation of the directive.
8. The item may only be accounted for if otherwise it would not be tax deductible, which is usually the case for companies.
9. For this reason, it is suggested (and by some authors considered admissible) to show the amount that has not been written up in the *Sonderposten mit Rücklageanteil* as well, although the law does not explicitely provide for such accounting method in this case, Haeger (1989), 245.
10. See in the grounds for the draft of the *Bilanzrichtliniengesetz, Vorblatt* (*Begründung Regierungsentwurf eines Bilanzrichtline-Gesetzes*), printed in Biener/Berneke (1986), 15; The transformation should be "steuerneutral," neutral in respect of taxes, Küting/Zündorf (1995), § 280 para. 106; Seckler (1995), 258; Haller (1992b), 316.
11. The discussion of which would lead too far in this context.
12. Provided that the value adjustments are not shown on the liabilities side as *Sonderposten mit Rücklageanteil*.
13. Standish (1991), 164; Scheid/Walton (1992), 115; Fortin (1991), 66; Scheid/Walton (1995), 172; The German basis was the Goering Plan (the worlds first national chart of accounts, decreed in 1937), which itself was based on a model chart of accounts by the German accounting professor Schmalenbach (*Kontenrahmen*). In detail on the origins of the PCG: Standish (1990), 337.
14. Code Général des Impôts, Annex 3 Article 38; translation by Walton (1995), 22; Memento Pratique Francis Lefebvre Comptable (1988), 33.
15. McCourt/Radcliffe (1995), 464, based on the jurisdiction of the *Conseil d'Etat*, the supreme administrative court.
16. Code Général des Impôts, Art.39-1: deductions from taxable profit may only be "depreciation actually accounted for by the business, subject to a limit of what is generally accepted practice for each type of industry, trade or enterprise," Burlaud/Messina/Walton (1996), 301
17. As it is the case in France, and in Germany when no *Einheitsbilanz* is drawn up.
18. No difference can be found in Germany, in cases, where only one profit is calculated (*Einheitsbilanz*).

19. In the case where taxable income is lower than commercial income before tax due to timing differences, higher taxes will be paid in later years and, to equalise the resulting tax expenses, an accrual for deferred tax on the liabilities side of the balance sheet is required. In the case where taxable income is higher than commercial income, less taxes will be paid later, an accrual on the assets side is required. see Baydoun (1995), 228.
20. Macharzina/Langer (1991), 206; Macharzina (1988), 144; Haller (1992b), 318; Suffice it to say that deferred taxes are usually not accounted for in individual accounts in France (neither on the asstes nor on the liabilities side; information in the notes is required though, Art.24 § 24 Décret 83-1020); they may be capitalized, and they must be shown on the liabilities side in Germany.
21. Only large companies fulfil the requirement of publicity: In 1991, of approx. 450,000 companies with limited liability (*GmbH*), only approx. 30,000 published their annual accounts or published a note with reference to the register in which the accounts have been filed. Medium sized companies simply refuse publicity, see Biener (1993), 176 (See also recent judgements of the European Court of Justice C=97/96 (Daihatsu) Dec. 4, 1997, C=191/95 Sept. 29, 1998.) For France: Parker (1996), 331.
22. However, especially in countries, where there is no direct link between taxation and accounting, tax aspects have proven to be an initiating factor for changes in accounting practice, Hopwood (1990), 51.
23. On the other hand, the already existing income tax rules could not have prevailed the accounting rules yet to be developed. Until the present day the ICTA does not include a definition of the word "profit." The determination of the profit was left to the business world, and, as from the end of the century, to the courts. In other words, tax law was not far enough developed in the 1840s to give outlines for accounting. In reverse, its mere existence hindered accounting to influence taxation.
24. Details on the historic development see Pfaff/Schröer (1996), 963; Huchatz/Daenner (1990), E 3.
25. Walton (1995), 17; Lamb (1996), 940; A similar situation prevailed earlier: In 1966 case law made clear that whether or not the taxpayer capitalized interest on capital borrowed to finance the production of an asset was relevant for taxation. Capitalisation of that interest thus lead to the non-deductability as a business expense in the current year of capitalization. The Inland Revenue later changed its view and inserted an amendment into the 1981 Finance Act, see Mumford (1995), 960.
26. Moreover, the following cases in particular are worth mentioning: *Symons v. Weeks and others*, 1983 STC 195, concerning long-term contract work in progress, in which reference was made to SSAP 9, and in which preference was given to the taxpayer, having drawn up his accounts on the correct principles of commercial accountancy; in detail on this case: Freeman (1987), 61 and 104. Also *R. v. Inland Revenue Commissioners, ex parte S. G. Warburg & Co Ltd*, 1994 STC 518.
27. SSAP (Statement of Standard Accounting Practice) 2: Disclosure of accounting policies SSAP 21: Accounting for leases and hire purchase contracts.
28. That enabled the company to make provision for the cost of a major overhaul against revenue in the profit and loss account for each period.
29. The overhaul costs would be treated as having been expended in the acquisition of a capital asset which involved making no provision against revenue before the cost of a major overhaul was incurred but charging the cost (once incurred) to revenue in subsequent periods as the hours which the aircraft was permitted to fly were used up.
30. Against: Whittington (1995), 452; Green (1995), 445; moderate Freeman (1987), 131; Freeman (1993), 477; Freeman (1995), 437.
31. E.g., Whittington (1995), 452, who answers the question whether accounting policy should be adopted as a basis for corporation tax with a plain "no." Similar to the effect Green (1995), 445;

In favor of accounts being taken as disclosing the taxable profit in all cases see Broke (1995), 460.

32. Moreover, in Germany prudence is interpreted much more extensive, as losses must be anticipated as soon as they appear not only probable, but sometimes even possible.
33. In so far, the cases have not resulted in additional legislation. Nevertheless, the Inland Revenue explained how they would apply the general principles set out in the Statement of Practice SP 3/91 (concerning finance lease rental payments, referring to SSAP 21), after the case *Gallagher*. See Inland Revenue Tax Bulletin Issue 15, 189. In detail on these views Sallabank/Woodgate (1995), 506.
34. Germany has even determined this interdependence in 1990 through further legislation.
35. McCourt/Radcliffe (1995), 471; Niessen (1992), 292 is of the opinion that comparability *is* ensured.
36. To this effect Niessen (1992), 292.
37. The Committee of Independent Experts on Company Taxation, chaired by Onno Ruding, met between January 1991 and February 1992, and at the request of the Commission, prepared a report on direct company taxation within the EC and its harmonization.
38. Küting (1993), 38; van der Tas (1992), 187, who is not supporting this recommendation.
39. This view is supported by the article of one of the members of the Committee, Vanistendael (1993), 23.
40. Vanistendael (1993), 23, first names the UK and Germany as the extremes, and then states that "(i)n between are most other Member States, which accept the profits from the commercial accounts as a starting-point for the computation of taxable profits with the understanding that taxable profits should be as close as possible to the figure of profits resulting from commercial accounts." His wording is very similar to the Committee's. It is thus suggested that van der Tas, 187 misinterpreted the Committee's statement. He believes that the Committee had a German or French model in mind, which includes distortions of the financial statement because of tax induced accounting (as shown below), to which he (rightly) strongly objects.
41. *Rückstellung für drohende Verluste aus schwebenden Geschäften,* a provision which can be considered the very manifestation of the prudence principle, and which is obligatory in financial reporting.
42. E.g., Siepe (1993), 136; Nobes (1993), 38 states that while it has been sometimes impossible to persuade the German government to agree with certain Anglo-Saxon accounting ideas, "it has been easier to achieve consensus with the German accountancy profession, often represented by partners from German offices of multinational accounting firms."

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# Firm Characteristics of Swiss Companies that Utilize International Accounting Standards

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**Key Words:** International Accounting Standards; Switzerland; Firm characteristics

***Abstract:*** *This study examines firm specific characteristics of Swiss companies that have voluntarily elected to prepare financial reports using International Accounting Standards (IASs). An identification of differences between companies that select to adopt IASs and those that do not should aid in determining what the perceived benefits might be. The variables tested were foreign sales activity, foreign stock exchange listings, debt/equity ratio, market value, size and audit firm.*

*The study used MANOVA and stepwise discriminant analysis to determine if differences existed between the group of 22 Swiss companies that adopted IASs and a group of 22 Swiss companies that use local standards, based on six independent variables. The foreign activity variables, percent of foreign exchange listings and percent of foreign sales were found to be statistically significant. Thus, the perceived benefits might be that international standards facilitate reporting to multinational stakeholders, and are not necessary for companies that are only required to report to domestic users. This study is an initial examination of Swiss companies that use IASs. Numerous questions, such as how does the market value companies' that utilize IASs, remain to be asked and investigated.*

Throughout history accounting practices and standards have been influenced by commerce and economic activity. Current multinational trade seeks not only to trade physical goods across borders but to invest and raise capital internationally as well. This creates a need to communicate the corporation's financial position and future goals to an internationally diversified community of investors and creditors.

Differences in accounting procedures among countries complicate the comparison of financial statements presented by companies from two or more countries. The evaluation and analysis of financial statements of companies from different countries is hindered when companies use measurement procedures which, in some cases, may cause differ-

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ences in earnings of up to 70% (Euromoney 1985, 152) or more, as in the case of Daimlier-Benz (Berton 1995, A13).

During the past two decades, the International Accounting Standards Committee (IASC) and other national and international organizations have devoted tremendous amounts of time and money to the development of International Accounting Standards (IASs). The purpose of the standards is to provide users with a common framework from which to evaluate the financial position of multinational corporations. One goal of the IASC is that "the quality of financial statements will be improved and there will be an increasing degree of comparability" (International Accounting Standards Committee 1995, 33).

Many questions may be raised with respect to the adoption and use of IASC standards. For example, who chooses to use the standards, why are companies choosing to use the standards, or how are the standards being used? The purpose of this study is to focus on one of these questions by examining variables which identify Swiss companies that utilize IASC standards. The result should provide a profile of a company which perceives benefits from using IASC standards. This profile should be of interest to the IASC since it may determine if the companies which have adopted IASC standards are similar to the entities the IASC is targeting. The research question addressed in this paper is:

> What firm characteristics identify a Swiss company that chooses to utilize international accounting standards?

The IASs, as mentioned above, seek to provide a framework for reporting to a variety of users. However, as Al-Basteki (1995) explains, these standards are useful to companies in developing countries. The FASB (1996) noted, within their comparison project report, companies in countries where standards are nonexistent or countries within which standards exist yet fail to provide adequate disclosure, have benefited from using IASC standards (p. 8). Therefore companies that may benefit from the use of IASs might be categorized into two groups: (1) companies in countries where there are no national standards, specifically developing countries; and (2) multinational companies that seek to provide a common set of financial statements for a variety of international users.

Empirical research on the voluntary adoption of IASC standards has been limited. Al-Basteki (1995) examined the firm characteristics of publicly traded Bahraini corporations that choose to report using IASC standards. His study examined the first category of potential international standard adopters. Swiss companies differ from Bahraini companies since Switzerland is a developed country and has established accounting standards. Examining Swiss companies allows for an investigation into the benefits perceived by companies whose country has a set of national accounting standards.

Although Swiss companies have a set of national standards, these standards have been criticized for a number of reasons, specifically for their lack of disclosure and use of special reserves. Thus, some Swiss companies might be motivated to adopt internatial standards as a means of providing reports which are perceived to be more complete; nothing is being hidden from the user. Other companies might be using them to present financial information to a diversified set of multinational users and may choose to use them to avoid the costs of multiple reporting and reconciliation.

This paper is structured as follows: the next section presents a brief overview of the IASC, followed by a description of the accounting environment in Switzerland, the fourth

section develops the hypotheses, the fifth section presents the results and the sixth section summarizes and concludes the study.

## INTERNATIONAL ACCOUNTING STANDARDS COMMITTEE

### Background

The IASC is a private organization representing professional accounting societies throughout the world. The IASC was formally organized in 1973. The original Agreement and draft of the IASC Constitution was composed by representatives of sixteen accounting bodies. The IASC now has over 100 member organizations from approxiamately 78 countries. The organization is not composed of representatives from a country's standard setting organization, but members of professional accounting organizations, for example the American Institute of Certified Public Accountants (AICPA) is a member and the Financial Accounting Standards Board (FASB) is not. As such the IASC standards are not mandatory for companies within member countries. Therefore, companies that utilize IASC standards do so on a voluntary basis.

The objectives, set out in the IASC Agreement, were:

> to formulate and publish in the public interest, basic standards to be observed in the presentation of audited accounts and financial statements and to promote their worldwide acceptance and observance (International Accounting Standards Committee 1975; 1).

The process of issuing IASC standards is similar to that utilized by FASB. An exposure draft is composed and released for comments. After comments are reviewed, a final draft of the issue is written and voted on by the IASC Board. As of January 1998 the IASC has issued 33 standards. Thirty-one standards had been issued at the time of interest for this study, 1995. As mentioned, when the IASC standards are published it is members' responsibility, under the Agreement, to "use their best endeavor" to ensure that financial statements comply with these standards (Brennan 1979, 157). Prior research has indicated that the impact of the IASC standards on accounting practices of a member country is directly related to the extent that currently accepted accounting practices differ from the newly issued IASC standard (see Evans and Taylor 1982, McKinnon and Janell 1984, Doupnik and Taylor 1985 or Purvis et. al 1991).

### Prior Research on Compliance with IASC Standards

Much of the research on IASC standards has compared the level of conformity between the "generally accepted accounting standards" of a particular country or countries and the IASC's standards. See for example, Doupnik and Taylor (1985), Frank (1979), McKinnon and Janell (1984), and Graham and Wang (1995). Early studies of compliance with IASC standards reported low levels of conformity between the accounting practices utilized by companies and the international standards. Evans and Taylor (1982) reported compliance

within France and Germany as low as 50 and 10 percent, respectively, in 1980 (p. 126). They concluded that the IASC had little impact at that time.

More recent research has indicated a higher degree of compliance. Purvis et. al (1991) provided an overview of 54 countries' compliance with the first 26 IASC standards. The total average compliance was 76.3 percent. There were higher levels of conformity with the earlier standards. For example, compliance with IAS number 4, which dealt with depreciation, was 98.2 percent. However, more recent standards had lower levels of conformity. Only 40.7% of the countries were in conformity with IASC number 26, which dealt with accounting and reporting by retirement benefit plans. Purvis et. al speculated that compliance with the earlier standards was higher because they dealt with more "fundamental" issues, thus they were easier to conform to (p. 27).

To this author's knowledge, only one study has examined the characteristics of companies that choose to use IASC standards. Al-Basteki examined five firm specific variables which might have been associated with a Bahraini company's choice to voluntarily utilize IASC Standards. Bahrain is an island country off the Saudi Arabian coast. The country does not have a local set of accounting principles.

The five variables Al-Basteki examined were (1) the influence of the external auditor, (2) industry accounting and reporting norms, (3) firm size, (4) extent of foreign operations and (5) the influence of credit providers. He examined 15 companies which adopted IASC standards and 11 which did not. The results of his study indicate that the external auditor does influence the choice by Bahraini companies to use IASC standards.

This variable study differs from Al-Basteki's in a number of ways. Due to limited data, Al-Basteki was confined to using an indicator variable to measure foreign activity. The present study will measure foreign activity on an interval scale. Another difference is that in Bahrain there are no local accounting standards. Switzerland does have an accepted set of accounting practices.

## SWISS ACCOUNTING STANDARDS

### Background

Switzerland is a country known for its political independence and stable economy. However, Swiss corporate reporting has not gained this same respect. Numerous criticisms have been aimed at the use of hidden reserves and limited disclosure.

Accounting practices in Switzerland are regulated by company law. The Code of Obligations was instituted in 1936. This code established Swiss "generally accepted commercial principles" (GACP). Many revisions have been made to the laws, most recently in 1992 with the requirement that companies meet certain criteria to publish consolidated statements. Coopers and Lybrand (1993) provides an overview of current Swiss accounting and auditing requirements.

Swiss company law allows for the provision of special reserves. These reserves are primarily created through the valuation and depreciation process of fixed and current assets. As Miller (1991) explains, "this allows management to manipulate the profit figure and to submit annual accounts with minimal information value" (p. 829).

To understand current accounting practices in Switzerland it is important to understand two points: (1) many Swiss companies began as family owned corporations; and (2) due to the banking structure within the country, many bank officers were on the board of directors of Swiss corporations. Due to these conditions there was limited need for additional disclosure. The low levels of capital dispersion resulted in a closer owner-manager relationship and thus limited agency costs (Miller 1991, 829).

As Swiss companies expanded globally they were severely criticized for use of reserves, and their lack of disclosure. An example of the frustration of financial statement users was provided in a Euromoney (1993) article. This article summarized a report prepared by Coopers and Lybrand (Suisse) and Pictect and Cie. which stated "Swiss companies have for a long time been regarded as lacking in transparency, economical with information and not entirely truthful in their accounting." (Euromoney 1993, p. 1).

The negative attitude of investors was one reason Ciba changed to IASC standards. A company spokesman reported that the use of international accounting standards was "giving the investor a clear message that we do not have 'special rules'" (Euromoney 1993, p. 37). Nestle is another example of a Swiss company which uses IASC standards. Believing that Swiss standards unfairly penalized shareholders by undervaluing its stock, Nestle adopted IASC standards in 1988. Their earnings multiplier has since increased from 10 to 14. (Euromoney 1993, p. 41). While many Swiss companies have adopted IASC standards many have not, and "analysts and investors still have to go through the laborious process of calculating more realistic earnings" (Euromoney 1993, p. 2).

The comments from Ciba and Nestle provide an indication of the benefits some Swiss companies perceive from using IASC standards. But which companies perceive benefits from IASC standards and which do not? As indicated by Euromoney 1993, many adjustments still must be made to determine the "real" earnings of a Swiss company. Management of the corporation must perceive some benefit from utilizing these standards. It might be that due to the many criticisms hurtled at the Swiss standards, based primarily on the use of hidden reserves, the IASC standards might be seen as a means to "legitimize" a company's financial statements.

## RESEARCH QUESTION

The purpose of this study is to identify variables that will provide a description of a Swiss company which chooses to utilize international accounting standards. Most of the arguments supporting the use of IASC standards are based on the expansion of global business and the ability to facilitate access to information for capital market efficiency. However, given that Swiss standards have been challenged for their lack of disclosure, it might be that Swiss companies choose to adopt international standards as a method to "legitimize" the information presented.

### Foreign Reporting Activity

One of the benefits of international standards is to provide multinational companies with a set of standards which can be used to report to various international constituents. Compa-

nies with higher levels of foreign activity might be required to report to a broader range of constituents. Thus, one set of variables which might influence a company's choice to adopt IASC standards might be the level of foreign activity.

Two variables will be used to measure foreign activity. The first variable, percent of foreign to total sales, measures the company's dependence on international markets. This may or may not indicate a need to prepare financial reports for these markets. Therefore, a second measure of foreign activity, foreign stock exchange listings will also be tested. This should proxy for reporting to foreign capital markets. Al-Basteki (1995) measured foreign operations using an indicator variable to identify whether or not a company had a foreign branch, office or subsidiary. It is anticipated that companies which use IASC standards will have higher levels of foreign activity than companies which use local standards. The hypotheses for these two variables, stated in the null form, are:

**H1:** The percentage of foreign to total sales of Swiss companies which use IASC standards is equal to the percentage of foreign to total sales of Swiss companies which use local standards.

**H2:** The percentage of foreign stock exchange listings of Swiss companies which use IASC standards is equal to the percentage of foreign stock exchange listings of Swiss companies which use local standards.

## Other Reporting Proxies

Two other proxies for reporting practices will be examined. These two variables aim at measuring the influence of creditors and shareholders. The first is the debt to equity ratio, to be referred to as the D/E ratio. Switzerland has a well established banking system. Due to the basic characteristics of debt covenants it is typically accepted that creditors may have access to more information than shareholders. Through the debt covenant creditors may be able to request specific information. Radebaugh and Gray (1993) argue that the development and relationship of banking and corporations within some companies provide the lender with more direct access to information (p. 164-165). Shareholders do not have this opportunity. They receive information as required by the stock exchange regulators. Thus, domestic banks may be more likely to accept Swiss accounting standards while at the same time requesting additional details on accounts. Therefore, companies with higher levels of debt may be less likely to perceived benefits from using IASC standards. The hypothesis stated in the null form is:

**H3:** The D/E ratio of Swiss companies that use IASC standards is equal to the D/E ratio of Swiss companies that use local standards.

The fourth variable examined is a measure of a company's reliance on equity markets. The market value of a company's stock will be a proxy for this factor. The market value is determined by multiplying the number of shares outstanding by the year end selling price of a share. The greater the market value of a company's stock in realtionship to the size of the company (total assets) the more sensitive a firm might be to the information needs of

shareholders. The market value of a company's stock is standardized using total assets, thus the variable market value to total assets is referred to as the M/A ratio.

It is anticipated that the higher the M/A ratio the more likely a firm will utilize IASC standards. The hypothesis in the null form is:

> **H4:** The M/A ratio of Swiss companies which use IASC standards is equal to the M/A ratio of Swiss companies which use local standards.

### Other Proxies

In accounting research, size has been used as a proxy for many factors. The use of size as a variable in this study is intended to serve as a measure of other influencing factors. Most specifically size might be an indication of a firm's ability to adopt and implement IASC standards. Larger firms may have the financial resources required to implement a new set of standards. Smaller firms might find that the benefits derived from using IASC standards might not offset the funds required to purchase software, hire consultants or train personnel. Thus, it is anticipated that larger firms are more likely to have adopted IASC standards. Total assets will be used as a proxy for size. The hypothesis in the null form is:

> **H5:** The total assets of Swiss companies which use IASC standards are equal to the total assets of Swiss companies which use local standards.

Al-Basteki (1995) reported that the firm's auditor had a significant influence on a company's decision to utilize IASC standards. He examined the role of each Big-Six firm independently. This study will use an indicator variable to determine if a Big-Six audit firm versus another audit firm influences the use of IASC standards. An international Big-Six audit firm might be perceived as having the expertise required to audit and present financial statements in compliance with IASs. It is anticipated that a Swiss company using IASs is more likely to engage an international Big-Six audit firm. The hypothesis in the null form is:

> **H6:** Swiss companies which utilize IASC standards will not be more likely to retain a Big-Six audit firm than Swiss companies which use local standards.

## RESULTS

### Data

The data set for this study was collected from the *Worldscope* November 1995 database and Moody's International Manuals. Worldscope is a CD ROM database providing information on approximately 11,000 companies from over 40 countries. Switzerland had 189 companies listed of which 45 were identified as having adopted IASC standards. An initial search identified 22 Swiss companies which utilized IASC standards and had complete data available, a 49% retention rate. These 22 companies were randomly matched by 2

**Table 1.** Company List

| *IASC Standards* | *SIC Code* | *Local Standards* | *SIC Code* |
|---|---|---|---|
| Alusuisse-Lonza Holding Ag | 3334 | UMS-Schweiz Metallwerke Holding | 3341 |
| BBC Brown Boveri Ltd | 3610 | Infranor Inter AG | 3621 |
| Brauerei Eichof | 2082 | Huerlimann Holding | 2082 |
| Cellulose Attisholz Ag | 2676 | Industrie Holding Cham Ag | 2672 |
| Cementia Holding 3241 | 3241 | Vetropack Holding | 3221 |
| Daetwyler Holding AG | 5065 | Walter Rentsh HOlding | 5045 |
| Elektrowatt Ag | 4911 | BKW Energie Ag | 4911 |
| Fotolabo SA | 7335 | Publicitas Holdings | 7311 |
| George Fischer Ag | 3321 | Von Moos Holdings | 3312 |
| Holvis Holzstoff Ag | 5111 | Prodega Ag | 5140 |
| Intershop Holding Ltd | 6531 | HPT Holding Ag | 6531 |
| Lem Holding SA | 3679 | Accumulatoren Fabrik Oerlikon Ag | 3691 |
| Logitech International SA | 3577 | Hilti Ag | 3540 |
| Mikron Holding Ag | 3541 | Scintilla | 3541 |
| Nestle | 2099 | Huegli Holding | 2099 |
| Pargcsa Holding SA | 6722 | Societe International Pirclli SA | 6719 |
| Phonak Holding | 3842 | SMH-Swiss Corp for Microelectronics | 3873 |
| Rieter Holding | 3552 | Schweiter Ag | 3552 |
| Sandoz Ltd | 2834 | Merck Ag | 2834 |
| Sika Finanz Ag | 3241 | Zuercher Ziegelein | 3241 |
| Sulzer Brothers Ltd | 3561 | Schindler Holdings | 3534 |
| WMH-Walter Merer Holding | 3564 | Zellweger Luwa Ag | 3564 |

digit SIC code with Swiss companies which used local standards, and had complete data. Table 1 provides a list of the 44 companies used in this study. Selecting companies within the same industries should eliminate or minimize any potential industry effect.

## Methodology

The first step of the analysis utlized MANOVA[1] to determine if any overall difference exists betwen the Swiss companies that adopted IASs and those that use local standards Weinfurt (1995) discussed the use of several procedures which might be performed to determine the significance of each variable, given that the MANOVA is significant. This study followed the MANOVA with stepwise discriminant analysis[2]. As Weinfurt explained, univariate ANOVAs will ignore any interaction or correlation among the vari-

**Table 2.**

A. Statistical Tests of Difference

MANOVA

| | *Value* | *F* | *NumDF* | *DenDF* | *Pr > F* |
|---|---|---|---|---|---|
| Wilk's Lamba | .7205 | 2.3276 | 6 | 36 | 0.0531 |

B. Stepwise Discriminant Analysis Summary

| *Step* | *Variable Entered* | *Partial $R^2$* | *F-Statistic* | *P > F* |
|---|---|---|---|---|
| 1 | FXCHGP | 0.1272 | 5.973 | 0.0189 |
| 2 | FSP | 0.1314 | 6.051 | 0.0183 |

*Notes:* FXCHGP: foreign exchange listings percentage;
FSP: foreign sales percentage.

ables under study. Using stepwise discriminant analysis allows for an analysis of the significance of each variable as it is added to or removed from the model (p. 262-264).

### Results

The results of the MANOVA and stepwise discriminant analysis are reported in Table 2. The MANOVA is statistically significant at the 0.10 level, which indicates that there are differences between the two groups. The stepwise discriminant analysis retained only the foreign activity variables. These two variables, percent of foreign sales and percent of foreign stock exchanges have the most effect for distinguishing between the two groups.

Other factors which were believed to have a possible influence on a company's choice to adopt international standards were not significant. Therefore, since the foreign activity variables differ among the groups it can be assumed that the group of companies that utilize Swiss accounting standards are basically domestic companies. These companies might assume that local investors and analysts are aware of the local standards, and of the potential lack of disclosure and reserves. The users are knowledgeable of the information the statements present and are thus capable of making comparisons and decisions based on the data provided.

The group of Swiss companies that utilize IASC standards can be assumed to be multinational companies. This group must perceive some benefit from providing financial statements based on international standards to investors and analysts outside Switzerland. As previously discussed, one such benefit might be that use of IASs sends a message to financial statement users that the company does not use "special rules" or hidden reserves. Another benefit, which corresponds to one of the IASC goals, is that the use of IASs increases the degree of comparability between their financial statements and those from other countries. Comparability of financial reports from companies in different courntries could be increased as companies from more countries begin to prepare financial reports using IASs. As investors examine companies on various stock exchanges, the use of IASs could aid their analysis by limiting their need to understand numerous local standards. Another benefit might be that the cost of financial reporting is reduced. Although there is a cost associated with preparing financial reports using IASs, this cost might be less than that required to prepare statements using standards from two or more foreign countries.

## SUMMARY AND CONCLUSION

The objective of this study was to identify firm characteristics that might distinguish between a Swiss company which utilizes local accounting practices and one which has voluntarily adopted IASC standards. It was anticipated that by identifying these characteristics a profile of a company which perceives benefits and one which does not perceive benefits from the use of international standards could be developed.

Using a sample of 44 Swiss companies six variables were identified as items which might explain what type of company would perceive a benefit from using international standards. Since the Swiss accounting standards have been criticized for their lack of disclosure and use of hidden reserves it was anticipated that Swiss companies would adopt

international standards as a means of letting the financial statement users know that they do not use special rules.

The only difference between the two groups of companies was the level of foreign activity, as measured by the percentage of foreign sales and the percentage of foreign stock exchange listings. The companies did not differ in terms of debt/equity ratio, market value/assets ratio, size or auditor.

The goal of the IASC is to develop international standards which will increase the comparability of financial reports issued by companies from different countries. This study confirms that companies with higher levels of foreign activity perceive a benefit from preparing financial statements using international standards.

This study is a preliminary exploration of companies that use IASC standards. As more data become available there are many additional questions which might be investigated. For example, Nestle stated that their earnings multiplier increased from 10 to 14 after adopting international standards. Thus, one question to be investigated is has the stock market reacted in a similar manner to other Swiss companies' utilizing IASs? Additionally, research could focus on the use of international standards by companies in countries other than Switzerland. Are there other benefits to using international standards other than to facilitate multiple reporting requirements?

One possible limitation of this study is the small sample size. Although 49% of the Swiss companies that are listed in the Worldscope database as utilizing IASC standards are represented, the sample size for the study is only 44 companies. With more data available it might be possible to utilize more robust statistical techniques and obtain a broader representation of IASs adopters.

Research on the use of IASC standards might also be extended by using a sample of firms from another country or group of countries to determine if the Swiss company profile is representative of companies which choose to use IASC standards. Continued research on the use of IASC standards, and on the costs and benefits from using them is needed to provide feedback to the IASC and to companies contemplating adopting these standards.

## NOTES

1. An initial phase of this study analyzed the data using paired $t$-tests. Five of the six variables were statistically significant, the debt/equity ratio was not. An examination of the correlation matrix indicated that five pairs of variables were statistically correlated. MANOVA was utilized in this study since paired $t$-tests ignore the potential interaction among variables.
2. Univariate ANOVAs were also analyzed and support the results of the stepwise discriminant analysis.

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# Collection and Transmission of Accounting Information Across Cultural Borders: The Case of US MNEs in Jordan

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**Key Words:** International accounting; Cross-cultural; Jordan; Branch office

***Abstract:*** *This paper examines some of the problems facing host country nationals as they work to comply with the US parent company's costing, accounting, and reporting mandates. The study contributes to our understanding of international accounting in three ways. First, it focuses on intra-firm rather than international coordination and control issues. Second, it provides numerous applied examples from inside business how cross-cultural misunderstandings can adversely affect firm performance. Third, it approaches issues from the perspective of the foreign (in this case Middle Eastern) accountant, controller or manager rather than from the more frequently studied perspective of the US parent. Presumably, a better understanding of the day to day problems facing off-shore foreign managers will help home-office employees work more effectively with their overseas counterparts.*

"There exists a widespread tendency to underestimate the importance of deeply rooted societal norms for arriving at...organizational solutions which will work and be stable...This does not mean that countries cannot learn from each other: On the contrary, looking across the border is one of the most effective ways of getting new ideas...However, applying these in one's own setting calls for prudence and judgment." (Hofstede, 1980: 373-74)

As the debate continues over the *de jure* harmonization of international accounting standards, *de facto* harmonization is already a mandate *within* many US multinational enterprises (MNEs). However, even within well-integrated MNEs, host-country cultural norms and business practices can affect the implementation of US parent company policies and procedures. This paper examines some of the issues facing host country nationals as they work to comply with the US parent company's costing, accounting, and reporting mandates.[1]

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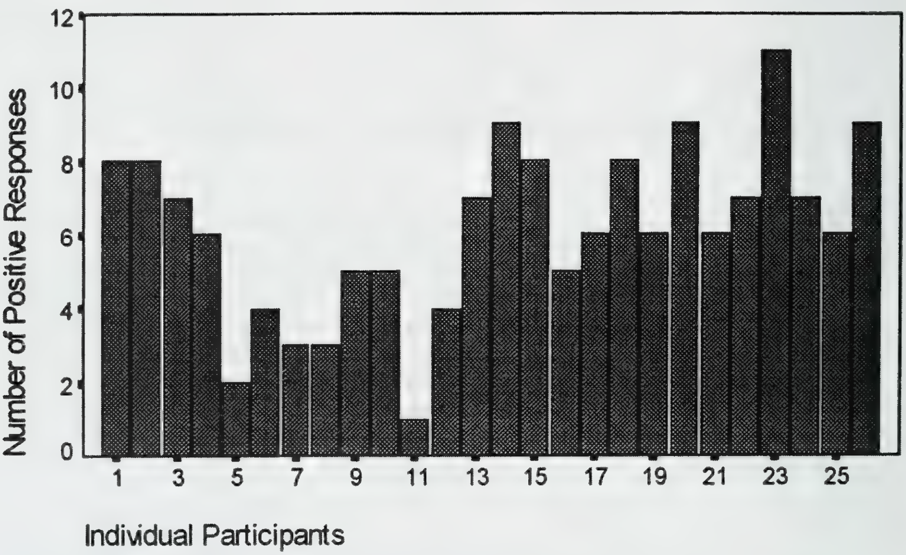
**Table 1.** Participating Businesses By Product Line

| *Category* | | |
|---|---|---|
| Advertising | Computer hardware | Insurance |
| Agricultural machinery | Computer software | Office equipment |
| Agricultural products | Consumer health care | Pharmaceuticals |
| Banking and finance | Food and beverages | Purification systems |
| Beauty products | Hospital consultants | Safety equipment |
| Computer systems | Hotels | Security systems |




11 Possible Measures of Exposure to US Cultural Values

- attended school in the US or western Europe
- has visited or worked in the US
- has close relatives living in the US
- has worked 10 years or more for an American company
- has routine direct personal contact with Americans at work
- is comfortable working with the US staff
- has routine direct personal contact with Americans outside of work
- has good to excellent spoken English skills
- has good to excellent written English
- reports a high overall understanding of American business, social and ethical values
- watches more than 10 hours of American television programming each week

**Figure 1.** Exposure of Respondents to US Cultural Values

## METHODS

Over a recent five-month period, 39 professional accountants, controllers, and general managers at branch and regional offices of 30 US multinational enterprises in Amman, Jor-

dan were interviewed. The companies represented the full spectrum of US MNEs doing business in Jordan (Table 1). Only four US MNEs declined to participate in the study.

Other informants included five Jordanian CPAs (partners in one regional firm and in three Big Six-affiliated firms); the political editor of a national newspaper; representatives from the Jordanian Association of CPAs and the Arab Society of CPAs; an American USAID economic development officer; and a founding member of the newly established American Business Council in Amman. Of the 49 informants, 44 were of Arab origin, mainly Jordanian, and five were women.

Depending on the particular expertise of each respondent, two types of interviews were conducted. All informants answered open-ended questions regarding their involvement with US MNEs doing business in Jordan and the Middle East. Those most directly involved in costing, accounting, and reporting to the US parent company also completed a more detailed personal questionnaire (see Appendix) resulting in 26 usable sets of responses. Interviews generally lasted one to two hours; all interviews were recorded and transcribed for later analysis.

A general measure of the primary informants' overall exposure to American cultural values was determined by their responses to 11 questions. Those giving the fewest positive responses were judged to have the lowest exposure to American values; those with the most positive responses the highest. The mean was 6.1 positive responses out of 11 and the median 6.0, indicating a good overall exposure to American culture values (Figure 1).

## COUNTRY BACKGROUND[2]

The Hashemite Kingdom of Jordan is centrally located in the Middle East, sharing land borders with Syria, Israel, Occupied West Bank, Saudi Arabia and Iraq. The Kingdom has a modern port facility on the Red Sea at Aqaba, an international airport outside Amman, and well-maintained roads throughout the country. Established in 1947, Jordan is a young country both in population and in fact (in 1995, over half the population was under the age of 15). A former British protectorate and long-time US ally, Jordan has a strong monarchy, a weak elected parliament, and a liberal press. English is the second language after Arabic.

The indigenous Bedouin, approximately half the population, are employed mainly in the public sector (government or military) and historically have shown a preference for a traditional, slow-paced lifestyle. The other half of the population is of Palestinian origin, the result of four major waves of Palestinian immigration (1948, 1967, 1973, and 1991). Palestinian Jordanians are heavily involved in the private sector of Jordan's economy, with strong interests in capital accumulation and economic activity. Two dominant traditions influence all segments of Jordanian society: the Arab heritage, with its robust hospitality and close-knit extended family system, and Islam, with its shared Judeo/Christian history. Generally speaking, streets are clean, crime is low, and education universal.

Unlike its oil-rich neighbors, Jordan has few natural resources (potash, phosphates, and cement). Recently, however, agribusiness in the Jordan Valley has become an expanding segment of the economy. Tourism and foreign aid contribute to Jordan's economic development, but the loss of trade with Iraq and the Gulf States following the 1991 Gulf War continues to impact the economy adversely. Although Amman boasts a large wealthy class, Jordan itself is a small market (population 4.2 million) with an estimated 17-30% of the

population below the poverty line. There is significant under-employment and a notoriously bloated public sector, necessitating eventual government reorganization, privatization, and downsizing.

Unfortunately, Jordan has been slow to attract foreign investments: "Capital is not brave," noted one informant speaking of the political instability in the region and the lack of foreign investment in the Amman Financial Market (stock exchange). Except for financial institutions which are now required to comply with IASC standards, 90% of listed Jordanian companies are out of compliance with IASC. In addition, Jordan does not have effective intellectual property rights protection but is working to meet world standards as a prerequisite for membership in the World Trade Organization (*Jordan Times*, April 5, 1997, p. 8; *Jordan Country Commercial Guide*, 1977, p. 3; Vivekanand, 1977, p. 8). Jordan has a strong social security/pension system for public employees, but further work is needed on minimum wage laws, unemployment insurance, disability insurance, and employer-provided medical insurance. Overall there was consensus among the respondents in this study that Jordan had come a long way in its 50 years of existence and was well-situated to progress in the next century.

## CULTURAL BROKERS

The accountants, controllers and general managers interviewed for this study were acutely aware of their roles as intermediaries between cultures (US and Middle Eastern). They understood that their job security depended on their ability to facilitate smooth connections between the US parent company and local distributors, suppliers, customers, employees, and regulators. As one informant expressed it, "I am the interpreter between the US and the Middle East. It is like converting an IBM diskette to an Apple diskette. You have a program that reads both. I am that program."

All participants expressed admiration for the US parents' technical and accounting expertise. They clearly understood the importance of complying with home office procedures and reporting deadlines, and they actively sought to emulate US business practices as best they could in the local setting: "We are all financial men. We know what [the US staff is] asking for and why they are asking for it."

## REPORTING TO CORPORATE HEADQUARTERS

Accounting and reporting requirements ranged from light to heavy, depending on size of operations, length of affiliation with the US parent company, and type of business. Routine reporting to the US included monthly, quarterly and annual financial statements, industry specific schedules, aging schedules of receivables and payables, petty cash and bank reconciliations in US dollars and Jordanian dinars (JDs), job order costing, full cost/revenue analysis, budgeting and budget variances, and trend analysis. There was unanimous agreement that nothing of importance was omitted from the parent companies' requests for accounting information.

There was also agreement that being "kept in the loop" was one of the most helpful functions a parent company could perform for their foreign affiliates. The loop included receiving comparative world-wide operating results, updates of US accounting rules and

**Table 2.** Impediments to the Collection and Transmission of Accounting Information Across Cultural Borders

| *Structural Issues* | *Cultural Issues* |
|---|---|
| Weekends and Time Zones | Regional Credit Practices |
| Computer Compatibility | Local Business Standards |
| English Language Skills | Bargaining |
| Payroll | Bureaucracy |
| Country-Specific GAAP | Personal Connections |
| Documentation | Lack of Transparency |
| Price Differentials | |

regulations, on-going technical and managerial training, and timely advice. Under these circumstances, the intra-company exchange of accounting information across cultural borders seemed, at first glance, an unlikely source of great concern.

## IMPEDIMENTS TO THE EXCHANGE OF ACCOUNTING INFORMATION

Ideally, an MNE's accounting information system should provide for the seamless "free flow of information up the entire value chain, even where the individual components of the chain are dispersed to all points of the earth" (Peters, 1996, p. 19). Unfortunately, this was not the case at any of the 30 participating US MNEs in Amman. Instead, the informants identified numerous impediments—both structural and cultural—to the collection and transmission of financial information. The structural issues, though significant, were generally task-specific and therefore somewhat easier to address. Issues characterized as being culturally imbedded, however, were more subtle in origin and less open to correction and accommodation within the multinational corporate setting (Table 2).

A parallel approach to understanding the issues facing overseas branch and regional offices would be to group them according to their impact on intra-company communications, compliance, and profitability. In the following discussion, the structural and cultural issues raised by the informants are presented in this context.

## STRUCTURAL HARMONIZATION ISSUES

### Communication Issues

#### *Weekends and Time Zones*

Thursday afternoons and Fridays are the Islamic weekend; Saturday is the first day of the work week in Jordan. Therefore, Mondays, Tuesdays, and Wednesdays are the only full work days in common with the US. Communication is also complicated by the seven to 10 hour time zone difference between Jordan and the US. The result is that the answer to an urgent question sent by e-mail or fax Thursday morning US-time may not be received back by the US staff until the following Monday morning. This time lag concerned some informants who were not confident that the parent company's accounting staff fully understood

the source of the delay—different weekends, not incompetence or laziness on the part of the overseas branch office staff.

### *Computer Compatibility*

More than half the accountants interviewed used locally or personally developed accounting packages rather than programs supplied by the US parent. Locally developed systems were generally thought to be more user-friendly, with better access to support and better adaptation to the three decimal points required of Jordanian currency. The main disadvantage of locally developed systems was their lack of sophistication, e.g., no integrated spreadsheets or aging schedules: "Sometimes the US office doesn't understand how much time it takes to do these schedules and reports manually." When the information systems were imported from the US, the Jordanian offices reported regular problems with installing updates from the home office.

### *English Language Skills*

This is a two-pronged issue, depending on the individuals and businesses involved. On the one hand, there was general consensus that writing in English was more difficult to excel in than speaking:

> My financial analysis is full and detailed, but it is not enough to just get out the numbers. My financial controller and chairman want to know where the variances are coming from. I should explain it. This is my work. They hired me for that. But I have some difficulties with writing these reports.

Other informants wanted the US parent to understand the depth of their immersion in English (the second language in Jordan):

> In Jordan, when we do anything for promotion or marketing, it is all in English. We don't even speak in Arabic when we deal with other Middle East countries. We communicate in English. The whole medical community here speaks English and they expect to hear English from you. This is one of the things the US people don't understand.

In addition, while some international accounting standards have been translated into Arabic by the Arab Association of CPAs and the local affiliate of KPMG (through IAS #32), at least one Jordanian CPA registered his strong preference for the English language version over the Arabic translation because of possible inaccuracies inherent in any technical translation project.

## Compliance Issues

### *Payroll*

Whether the Jordanian affiliates used a US-supplied accounting package or simply reported gross payroll for processing in the States, social security and other payroll deduc-

tions needed to be adjusted to conform to the right country's laws and regulations. This became particularly complicated when the Jordanian affiliate was paying both local and US managers in both dollars and JDs. Mid-year currency devaluations would further complicate payroll accounting, as would different filing deadlines for each country. For example, the Jordanian social security system requires prospective salary information on a calendar year basis, whereas the US parent may decide on raises any time during the year.

### *Country-Specific GAAP*

Jordan encourages but does not mandate international accounting standards (issued by IASC) and auditing standards (issued by IFAC) (Al-Rai & Dahmash, 1996). The larger Jordanian branch offices, therefore, noted the additional burden of keeping two sets of books, one for Jordanian tax reporting and one for US GAAP:

> It should not be taken for granted that we always understand the US requirements. Sometimes they deal with us as if we have been living in the US for the past 20 years. For example, I know there are many accounting standards that come out. We are not kept abreast of what is happening. They don't send all that unless you specifically ask for it. Here we follow the local practices, but we do file with the parent under US GAAP, so we have to adjust.

### *Documentation*

Documentation issues occurred in both directions. On the one hand, low-context US auditors wanted itemized invoices, but an application for the installation of a telephone needs a stamp and "the guy who sells you the stamp is outside under an umbrella on a table with a typewriter. He doesn't have a receipt. Even if we pay $300 for stamps, they won't give you a receipt."

On the other hand, the Jordanian tax authorities in one case insisted on seeing all supporting documentation for allocated advertising expenses from the US home office. "Fine, but we will have to send a Boeing 747 with the documentation," responded the US parent company, not understanding why audited financial statements were not documentation enough. The US Treasury Department eventually intervened and convinced the Jordanian tax authorities to accept the figures the IRS had already accepted from the parent company.

## Profitability Issue

### *Price Differentials*

Depending on the situation, it may or may not be more cost-effective to pay intra-company expenses, such as international freight, locally. Failure to make situation-specific adjustments to company-wide protocol can be relatively costly for smaller, low-margin overseas branch offices. Some informants felt the US staff saw their requests for special treatment as weaknesses in their budgeting projections rather than as sensible and necessary adjustments to local business conditions.

The structural issues discussed above are relatively straightforward and require no particular expertise in cultural awareness or understanding to resolve. Unfortunately, such clarity is not a characteristic of the next group of problems raised by the informants.

## CULTURAL HARMONIZATION ISSUES

International accounting harmonization efforts have been criticized by some for imposing western-style accounting standards on developing countries (Hove, 1986). Accounting, it is argued, should meet local societal needs, not the needs of a distant national economy. A parallel criticism can be made when individual MNEs are unwilling or unable to adapt their business practices effectively to the host-country culture, for example, when US MNEs export seemingly rational home-office pricing policies, cash flow expectations, and advertising techniques to countries where bargaining, family connections, and Byzantine bureaucracies both define and circumscribe all business efforts.

Making a distinction between high-context and low-context cultures can help clarify some of the seemingly unrelated themes that dominate any discussion of cultural issues and international business. Middle Eastern culture is generally considered to be high-context, while US culture is considered low-context (Hendon, *et. al.*, 1996; Park *et al.*, 1996; Baydoun & Willett, 1995; Hofstede, 1980). High-context cultures communicate a great deal of information non-verbally through personal status, family ties and known associates. In high-context cultures, greater emphasis is placed on personal trust between business associates than on the technical details of a written contract. Subtlety and inference are highly valued as are the creation and nurturing of personal relationships. High-context cultures express a strong preference for face-to-face communication. One participant in this study explained it as follows:

> I want to see the reflection of my words on your face. I want to use my personal power. I want to use the fact that we are relatives, or that I know somebody that you know. I want to bring all of this to the table to affect your business decision. This is our culture, our tribal heritage.

In contrast, in low-context cultures such as the US, documents rather than relationships are given highest priority. Agreements tend to be written rather than spoken, tolerance for ambiguity is low, and logic, structure, precision, and detail are considered effective components of a compelling argument. One informant who had studied in the US expressed the differences between Jordan (a high-context society) and the US (a low-context society) as follows:

> I loved the States. Everything had a system. You know what you have to do, and if you do what you have to do, you are okay. For example, in the States, you can make all your payments—electricity, phone, water—by mail. You can even settle a fine by mail! You don't need to contact people personally. Here [in Jordan] you have to follow up on every single issue personally or send a messenger to follow up.

The following section examines specific issues that can arise when low-context companies conduct business in high-context cultures. Several participants stated that these types of

cross-cultural issues are not limited to US companies doing business in the Middle East, but can also be found throughout South America and Africa, at least to the extent those cultures are also high-context.

## Profitability Issues

### *Regional Credit Practices*

Wire transfers of funds are considered unreliable between certain locations in the Middle East, but letters of credit (LCs) are a common method of receiving payment. Two unusual problems arise when using letters of credit in Jordan, both of which put the branch office in the unenviable position of having to offer interest-free credit to their customers. First is the use of *time* letters of credit which delay receipt of payment in US dollars up to six months . While it is true that the recipient (the branch office) has to agree to accept a time letter of credit rather than a sight draft, in highly competitive markets the branch office may have no real choice if sellers of similar goods are offering buyers such delays before payment (Oppenheim, 1993, p. 137).

A second delay in the collection of cash through letters of credit involves documentation requirements attached to some LCs. When a buyer submits an application to the bank for a letter of credit and identifies on that letter the documents the branch office must present to the bank before collection is allowed, "some foreign banks do not discourage their letter of credit applicants from incorporating conditions that in effect represent 'built-in discrepancies'" making it difficult for the seller (the branch office) to make the collection (Mooney & Blodgett, 1995, p. 180). The US parent company, working in a low-context, highly-regulated lending environment, may not understand how such complications can occur in an official document and may erroneously attribute delays in collection to poor cash management skills rather than to culturally acceptable delay tactics—tactics that cannot be circumvented without alienating customers.

Ordinary collections are also a problem in countries like Jordan where good personal relations with customers are a business necessity:

> Maybe this is not a problem in America, but in Jordan we cannot push a client to pay. We would rather give them a 50% discount than take them to court. Collections are a major problem. Usually we collect a partial payment in advance, but sometimes when you have a good relationship you don't want to spoil it. The US parent sometimes does not appreciate that.

### *Local Business Standards*

In the aggressive world of business, it seems counter-intuitive to avoid using sophisticated business tools to impress local audiences. Yet avoidance of the high-tech and the high-powered may in fact be the wiser strategic choice in some overseas markets. Visiting US business personnel were frequently faulted for their overly elaborate computer-generated presentations:

> Analytical science is highly developed in the States—the way they dissect, analyze and research financial information. This is unheard of in Jordan. Many companies still operate manually with journals and ledgers. Even the government records by hand.

Likewise, it can be difficult to convince the US parent that money spent on advertising and public relations would be unlikely to provide the expected returns in Jordan as it might in the US:

> We try to explain the competition here [to our US parent]. We are competing with small shops, not international firms. Their quality is not the same but their prices are lower. Customers don't care about our slick PR. All they care about is cost. The people here have a lot of free time, so they work the street to find one dollar less in cost.

Product warranties are received by local consumers with similar skepticism:

> Here customer protection is unavailable, and the customer does not trust suppliers. Even if you promise to provide service, they will not believe you because there is no consumer protection from the government. So mainly people just judge by initial price.

### *Bargaining*

American companies were generally considered to be inflexible when asked by their Jordanian affiliate to compromise on pricing, especially since such compromises are considered an ordinary cost of doing business with high-context Middle Eastern customers:

> Everyone compromises here. You've got to give something, that's the mentality in the Middle East, the Far East, practically everywhere in the world. You've got to give and take. You don't want whoever you are dealing with at the end of the day to think they didn't walk away a winner!

Flexible costing strategies should be in place to enable overseas affiliates to compete effectively in a bargaining-based market:

> An American company quotes a price, say $100, for something, and that's it. Take it or leave it. This is wrong. Very often we go back [to the US parent] and say, "Can't we give up 3% and get the job?" Very often they will answer, "But this is the price. We can't change our prices. This is the price list. It's been painstakingly developed."

The Jordanian affiliates wanted the US staff to understand this process in the context of accepted local business practice and not as annoying requests for special treatment.

### *Bureaucracy*

The government bureaucracy in Jordan is difficult in every sense. Laws may change unexpectedly, ministries may or may not be computerized, frequent changes in ministers generate new sets of interpretations, coordination between ministries is often lacking, and exceptions can be made at every level. "It is one heck of an archaic bureaucracy and makes

absolutely no sense whatsoever." Registering a letter, for example, may take 90 minutes in three different post office lines. In addition, with 70% over-employment in the government sector due to guaranteed job security, there is little incentive for government employees to provide efficient service. On the contrary, "if you keep knocking on their door they feel a little more important."[3]

Clearing items through customs—a particularly frustrating experience mentioned at great length by every single informant—can take an inordinate number of repeat visits to the airport or seaport:

> The US is not aware of this. They say "Oh, I sent you something by courier. Why don't you put it to good use?" They can't understand why we can't get things out of customs. You can't explain that somebody is having breakfast so it destroys a whole day for you because he wasn't free to look at your documents.

### *Personal Connections*

In Jordan, family ties and personal connections (*wasta*[4]) organize, direct and influence every level of business operations, from hiring decisions to job performance evaluation. Connections are needed to gain access to government officials, to submit tenders, and to locate distributors to support new product lines. Trust built on personal or family connections takes precedence over more formal, but impersonal, legal contracts. "US firms protect themselves quite well, hire the best lawyers. You make a good legal document, but in the end [in the Middle East] you may really offend the ones you are trying to deal with."

Personal relationships are developed and nurtured on a daily basis, and the Jordanian office reflects this attitude. Business is rarely discussed immediately. Coffee and small talk come first. Private meetings seem not to exist. Offices maintain an open door policy which means that anyone is welcome to enter an office and begin conducting business regardless of who is already there. Such interruptions are not considered poor form, as might be in the US, but a sign of hospitality and good business.

The Western preoccupation with time is seen as incompatible with the development of meaningful personal relations (Ferraro, 1990), even when the slower, more sociable pace of business interferes with agreed-upon deadlines:

> If I say "Okay, I will have this sorted out tomorrow," it doesn't mean tomorrow. It could mean two days, a week. When an American says tomorrow, he really means tomorrow, so he rings the next day. We sit around and make jokes about these things.

The importance of personal relationships extends to customers as well. In the small but competitive Jordanian market, larger customers feel like they are "doing you a favor" buying your product, and they expect to be pampered:

> That's where you get into conflict with the parent company. If something goes wrong with an order [e.g. delayed State-side], you have to pamper the customer. So you go back to the parent and say, "We know it's not right, we know it's not policy, but can't we do something about it?" If they wave the book at you, then you're dead.

The metaphorical book, of course, represents the low-context American business virtues that regularly frustrate business negotiations in high-context cultures.

Strong family ties may also interfere with the development of company loyalty among employees (Kozan, 1991; Jaggi, 1975) and can undermine job performance evaluation in quite unexpected ways[5]:

> Jordanians are very hospitable to Americans. Some of the managers might invite you out to dinner, and you accept because you want to mingle with the locals. If I invite you to my house and you meet my children and my wife, it is not acceptable for you to fire me three months later. There is also a tendency for me to think I don't have to work hard because there is a personal relationship between us.

Recalling his own experience being evaluated by an American employer, one Jordanian accountant was particularly proud of the way he had accepted feedback the American way:

> I understand American values very well, especially in the business environment. It is straight-forward. You don't have to have family connections. I was recently subjected to a unique situation where my US boss—we get along very well—had to enforce the rules, regulations and standards of the company. I would have taken it personally, but because I understand the American values, I did not.

### *Lack of Transparency*

The legacy of Bedouin tribalism reinforces a strong family business mentality in Jordan. As a result there is a decided preference for obfuscation in business dealings, i.e., for keeping it in the family (Zarzeski, 1996; Baydoun & Willett, 1995; Gray, 1988; Jaggi, 1975). For example, despite the potential positive effects on capital accumulation, the Amman Financial Market has resisted general implementation of international accounting and auditing standards for listed companies due in large part to related-party full disclosure requirements: "Even the lawyers don't give you all the necessary information. You can feel they are hesitating."

This cultural preference for subtlety and inference can have unwanted ramifications for the Jordanian affiliate when communicating with corporate headquarters. Because Jordanians do not necessarily expect either a direct question or a direct answer, they may ask for information indirectly, with the expectation of ultimately triangulating on the desired answer through several different perspectives. One informant expressed concern that the US accounting staff must think his Jordanian staff incompetent because of the way they asked for the same information from the home office again and again. He felt this cultural pattern of triangulation would not be understood in the US where straightforward answers to straightforward questions seemed more the norm.

## DISCUSSION

The overarching problem facing the overseas accountants, controllers and managers in this study was how to maintain credibility with the US staff while asking for the special treatment they felt was necessary to conduct business effectively in their region. For example,

**Table 3.** Impact of Structural and Cultural Differences on Profitability and Capital Accumulation

| | *Low Impact* | *High Impact* | *Account Effect* |
|---|---|---|---|
| Structural Issues | | | |
| Weekends and Tune Zones | * | | |
| Computer Compability | * | | |
| English Language Skills | * | | |
| Payroll | * | | |
| Country-Specific GAAP | * | | |
| Documentation | * | | |
| Price Differentials | | * | Freight expense |
| Cultural Issues | | | |
| Regional Credit Practices | | * | Interest expense |
| Local Business Standards | | * | Sales |
| Bargaining | | * | Sales |
| Bureaucracy | | * | Wages (lost time) |
| Personal Connections | | * | Sales |
| Lack of Transparency | | * | Paid-in Capital |

in high-context cultures such as in the Middle East, subtlety, inference, and personal loyalties are indispensable business tools, and ambiguity is viewed as an opportunity not a problem. The respondents were concerned that the US staff would confuse cultural differences with lack of business acumen and that their own particular professional expertise, evident in the local business arena, would be unrecognizable out of context.

As one informant explained, "Making the two cultures meet is a challenge. It is not that the US does not trust the branch, but you must educate them from the beginning to understand." For example, expenses such as aggressive advertising campaigns and superior product warranties might enhance sales in the US but have little ability to attract new customers in Jordan. Likewise, expenses such as special pricing, favors for large customers, long-term interest-free credit to customers, and discounts on late collections may seem irrational and unacceptable by US business standards but are absolutely essential for the Jordanian affiliate.

The point to remember is that cultural differences are more than a curiosity. They can and do have direct impact on profits, often a greater impact than the more straight-forward structural annoyances frequently associated with overseas operations (Morosini, 1997; Ferraro, 1990).[6] Table 3 compares the impact of the structural and cultural issues presented above on profitability and capital accumulation.

The unanimous recommendation made by all participants was for the US staff—not just the regional staff—to visit the Middle East and experience first-hand how business is actually conducted.

> We would like them to understand us better One very helpful factor would be if they would come more often and make on-site visits and see what kind of problems we encounter on the front lines. If you describe it on a piece of paper it doesn't give you the feel for what is really happening. Sitting there 8,000 miles away doesn't help in my judgment. Here we have to adapt, see what works, and try to improve on it.

This recommendation, of course, reflects the respondents' high-context penchant for direct, face-to-face contact.

The burden of cultural translation within a single MNE probably should not fall exclusively on the overseas affiliate. Negotiating the complexities of international business requires mutual understanding of how culture affects business. Increased direct personal interaction is only one possible method of reducing the likelihood that cultural differences interfere with profitability. A useful area for future research would be to examine the effectiveness of other methods currently being used to overcome problems associated with the collection and transmission of accounting information across cultural borders.

**Acknowledgments:** The interviewer wishes to thank the 49 participants in this study for their time, their patience, their professionalism, and their willingness to share their insights.

## NOTES

1. Using Chandra and Newburry's (1997) classifications for international business research, this topic falls under "country/environment/comparative studies," "managing the MNE-international accounting," and "manager/buyer/consumer issues."
2. Sources include *Business Middle East* (1997); "Jordan" (March-April, 1997); *Jordan Country Commercial Guide (1997); Country Data-Jordan* (1996)*);* Minhas *et. al* (1995); *Investment Climate in Jordan (1995)*; and *Background Notes-Jordan* (1994).
3. King Hussein has recently taken steps to reduce the bureaucracy but must do so without alienating the Bedouin who dominate the civil service ranks ("Government Plan Divides Bureaucrats into Three Groups, 3rd to be Relocated," *Jordan Times*, 4 April 1997: 1, 7).
4. "*Wasta* means personal connections. To a certain extent it is also 'scratch my back and I'll scratch yours.' It could include kickbacks, but *wasta* is socially acceptable and part of the culture. Kickbacks are not."
5. See Cyr (1995) and Nicholson *et al.*(1997) for detailed analysis of the influence of cultural attributes on job performance evaluation at overseas locations.
6. See Reeves-Ellington and Anderson (1997) for a discussion of how to maximize competitive advantage through an information system that aligns diverse cultural, social and business values within a single MNE.

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# APPENDIX

## CONFIDENTIAL QUESTIONNAIRE FOR ACCOUNTING OR FINANCIAL MANAGERS OF US COMPANIES DOING BUSINESS IN JORDAN

### SCALE FOR ANSWERING SCALED QUESTIONS

low.......................................................................high
seldom.......................................................................always
not very.......................................................................very
not necessary.......................................................................very necessary
not useful.......................................................................very useful
1 2 3 4 5

**PERSONAL BACKGROUND**

1. ________ year born
2. ________ gender
3. ________ nationality

**EDUCATIONAL BACKGROUND**

4. ________ undergraduate major
5. ________ year degree received
6. ________ in which country
7. ________ professional certification in accounting, if any (CPA, CMA, CA, etc.)
8. ________ year acquired
9. ________ country of certification
10. yes/no Any formal training in accounting from US parent company? (circle one)
11. 1 2 3 4 5 If you answered "yes" above, how effective was the accounting training?
12. 1 2 3 4 5 Rate your understanding of Jordanian commercial law.
13. 1 2 3 4 5 Rate your understanding of Jordanian tax law?
14. 1 2 3 4 5 Rate your understanding of US accounting standards (GAAP)..
15. 1 2 3 4 5 Rate your understanding of International Accounting Standards (IAS).

**PROFESSIONAL EXPERIENCE**

16. ________ years with this company
17. ________ prior years of work experience in accounting, finance or data processing
18. ________________________________________ current job title
19. ________________________________________ major job responsibilities
20. How important was each of the following in your initially being hired by this company:
    - 1 2 3 4 5 your education
    - 1 2 3 4 5 your earlier work experience
    - 1 2 3 4 5 your understanding of the Jordanian/Middle East business environment
    - 1 2 3 4 5 your knowledge of English
    - 1 2 3 4 5 personal or family connections (knowing people in the business)

**YOUR FAMILIARITY WITH US CULTURAL VALUES**

21. ________ For how many years have you worked in the US?
22. yes/no If no work experience in the US, have you ever traveled in the US?
23. yes/no Have you close family members living in the US?
24. 1 2 3 4 5 How much direct personal contact do you have with Americans at work?
25. 1 2 3 4 5 Direct personal contact with Americans outside work?
26. __________ How many hours per week do you watch American programs on TV?
27. yes/no Has your US parent company offered any cultural sensitivity training? If yes, please explain:
28. 1 2 3 4 5 rate your spoken English
29. 1 2 3 4 5 rate your written English

30. 1 2 3 4 5 rate your understanding of American values (business, social, ethical)
31. 1 2 3 4 5 rate your comfort level when communicating with the US parent company

**GENERAL BUSINESS CHARACTERISTICS**

32. __________ How many years has this firm been affiliated with a US parent?
33. What is your primary business in Jordan? (If a regional office, check "service.")
    _____ manufacturing
    _____ sales
    _____ service
    _____ other: ________________________________________
34. What best describes your business?
    _____ a cost center (no revenue)
    _____ profit center
    _____ both a cost center (regional office) and a profit center (branch office or joint venture)

**RELATIONSHIP BETWEEN JORDANIAN COMPANY AND US AFFILIATE**

35. yes/no Is this a branch office (can sell in Jordan)?
36. yes/no Is this a regional office (administrative/service)?
37. If this is a regional office, who ultimately handles the sales function:
    _____ same office personnel but under "branch office" designation
    _____ General Sales Agents
    _____ Distributors
38. yes/no Is this a joint venture?
39. ______________________________ If a joint venture, country origin of primary investors.
40. This company's accounting records are maintained in compliance with which of the following:
    _____ US generally accepted accounting standards (US GAAP)
    _____ Jordanian accounting standards
    _____ International accounting standards (IAS)

**DEGREE OF SIGNIFICANCE OF BRANCH TO PARENT**

41. _______ What percent of total US parent business does this office/region represent?
42. _______ Approximately what percent of total US parent business originates outside the US?
43. _______ number of employees at this office
44. Primary source of capital investment
    _____ US
    _____ Jordanian
    _____ multiple sources: ______________________________

**ACCOUNTING STAFF**

45. __________ number of full-time accounting employees in this office
46. __________ percentage of time/month you spend on accounting/finance duties

**ACCOUNTING SYSTEM**

47. Which type of accounting system is used: computerized/manual (circle one)
48. Origin of the computerized system:
    _____ directly from the US parent
    _____ bought off the shelf locally
    _____ self-developed locally
49. 1 2 3 4 5 How useful do you find the computerized accounting system?

**REPORTING TO PARENT**

50. What type of financial reporting is required by the US parent company:
51. Which financial report or schedule to you think is most important to the US parent:
52. _______________ In what currency to you report to the US parent?
53. _______________ In what currency do you keep the local accounting records?
54. Who bears the currency translation risk:
    _____ US parent

_____ this company

_____ general sales agents or distributors

55. 1 2 3 4 5 How easy is it to comply with the US parent's reporting requests?

56: If your answer in #59 above was less than "5," please give an example of some difficulties:

57. Who has primary responsibility for the following, the US parent (US) or this office (JO). If responsibility is shared, please circle both:

US/JO hiring the accountant
US/JO setting sales targets
US/JO short-term cost/volume/profit analysis
US/JO long-term capital budgeting analysis
US/JO cash management
US/JO foreign currency translation
US/JO internal control procedures

58. yes/no Is this company audited annually by independent external auditors?

**QUALITY OF PARENT/BRANCH RELATIONSHIP**

59. __________ How many times per week is this office in contact with the US accounting staff?

60. By which method do you prefer to communicate with the US parent:

_____ e-mail

_____ fax

_____ telephone

61. 1 2 3 4 5 How available is the US accounting staff to help you or answer questions?

62. 1 2 3 4 5 How responsive is the US parent to your feedback and suggestions?

63. 1 2 3 4 5 Rate the level of understanding you think the US parent has of the Jordanian or Middle Eastern business environment. Please explain any answer other than "5."

64. 1 2 3 4 5 Rate your participation in the US parent's financial decision making process.

**SELF-REPORTED COMPLIANCE WITH PARENT REQUESTS FOR INFORMATION**

65. 1 2 3 4 5 What priority do you place on US parent's requests for information?

66. What type of financial information requested by the US seems unnecessary for local business success?

67. What financial information is not reported to the US that you think should be of interest to the US?

68. Is any financial information not disclosed to the US parent because of noncompliance with US accounting standards? If yes, please describe in general terms.

69. Accommodations have you made to help you stay in compliance with parent reporting requirements?

**RECOMMENDATIONS FOR US PARENT COMPANY**

70. What is the US parent doing that is particularly helpful to your business success?

71. What changes could you suggest that might improve your financial interaction with the US parent?

72. 1 2 3 4 5 Please rate the overall quality of your financial relationship with the US parent.

# Capsule Commentaries

**Transfer Pricing Handbook,** *edited by Robert Feinschreiber, New York, John Wiley & Sons, second edition 1998, 2 vols.*

This two-volume work contains 58 essays by 53 experts, dealing mainly with the taxation effects of transfer pricing strategies and practices applicable to U.S. companies doing business abroad and foreign companies doing business in the U.S. As the editor states in the Preface, "The *Handbook* focuses on current taxation under IRC Sections 482, 6038A, and 6662, buttressed with legislative and regulatory developments during the 1986-1997 period. The *Handbook* addresses OECD rules and transfer pricing rules in other countries to the extent that these rules are relevant to the United States" (p. xiii).

This second edition is more than twice the length of its predecessor. Among the section headings are: changing the transfer pricing process, analyzing sales of tangible property, applying new transfer pricing methods, intangibles and services, apportioning taxable income, and coordinating tax and nontax issues.

S.A.Z.

**Significant Differences in GAAP in Canada, Chile, Mexico and the United States,** *A Joint Study Undertaken by the Canadian Institute of Chartered Accountants, Colegio de Contadores de Chile A.G., Instituto Mexicano de Contadores Públicos A.C., and the U.S. Financial Accounting Standards Board, Toronto, CICA, 1996, 107 pp.*

This paperback carries the subtitle, "An Update of the Analysis Included in *Financial Reporting in North America* to June 1996." The earlier joint study was profiled in Volume 33, Number 3 of this journal. Not only have the references to Canadian, Mexican and U.S. accounting standards been updated, the standards extant in Chile have been added. The addition of Chile anticipates the eventual expansion of the North American Free Trade Association (NAFTA).

Unlike the earlier three-country analysis, this second edition does not deal with comparisons of the countries' standard-setting processes and conceptual frameworks. This second edition, which consists entirely of a series of narrative tables, without textual amplification, also emphasizes comparisons with IASC standards.

One sentence in the Preface of this second edition is astonishing in the light of the exhaustive FASB study, completed in 1996, which found 255 variations between IASC

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standards and U.S. GAAP: "No areas were identified [in the previous study] in which accounting standards in all three countries were different from those of the IASC" (iii).

S.A.Z.

**Accounting Principles: Significant Differences Between the UK and the US,** *KPMG, London, second edition 1996, 147 pp.*

This volume is organized, in the main, into general issues (e.g., cash flow statements, consolidations, business combinations, foreign currency translation, and hedging), specific balance sheet items, and specific profit and loss account items. U.K. principles are presented on each left-hand page, with the U.S. principles given on each right-hand page. In this way, comparisons are easily detected. Differences in terminology as between the U.K. and the U.S. are displayed in a brief appendix. This edition was issued in March 1996.

S.A.Z.

**Accounting Principles and Practices in Canada and the United States of America** *(published annually), Price Waterhouse, Toronto, 62 pp. (1996/97 edition).*

This annual survey has been conducted by the Canadian firm of Price Waterhouse. It highlights the significant differences between Canadian and U.S. accounting principles. Primary emphasis is placed on those differences that are most likely to affect financial statement presentation. The most recent survey is for 1996/97. A survey for 1997/98 will not be published, but, once the merger of PW with Coopers & Lybrand is consummated, the future of the series will be evaluated.

Readers may be surprised at the number of differences between Canadian and U.S. GAAP, which are believed to have so much in common. To some degree, the two countries' regulatory environments promote such differences. In the survey for 1996/97, PW writes: "Generally, there is more codification of accounting principles from official standards-setting authorities in the United States than in Canada. As a result, United States principles frequently are absorbed in Canada and become part of generally accepted practice without necessarily being incorporated in a Canadian standard." The U.S. influence in Canada may be explained partly by the fact that 412 Canadian companies (as of December 31, 1997) were registered and reporting to the U.S. Securities and Exchange Commission. The U.K. was second, with 97 companies.

S.A.Z.

# Book Review Section

The book review section is interested in works published in any language, as long as they are comparative or international in character. The author or publisher of such works should furnish either book review editor with two (2) copies of the work, including information about its price and the address where readers may write for copies. Reviews will be assigned by the book review editors. No unsolicited reviews will be accepted. Suggestions of works that might be reviewed are welcomed.

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The International Journal of Accounting

# Book Review

**Kaikeikankyo Nippon no Kaikei to Kokusaitekichowaka no Shiten kara** (Japanese Accounting and Its Environment from the Viewpoint of International Harmonization), *by Elli Okada, Dobunkan, Tokyo, 1997, 406 pp. ¥6,400 (approx. $45).*

After World War II, the Japanese economy went through a period of very conspicuous change. This began with the economic recovery right after the War, leading to an accelerated growth of the economy, which has made Japan one of the most powerful economies in the world. The power and the role played by Japan in the worldwide economy has led to some economic friction with its overseas counterparts. After the recent burst of the economic bubble, Japan is now undergoing a long and sluggish recovery.

Looking back in history, there has never been such a sudden and rapid economic change that has affected and extremely amplified the social sense of value and has caused a feeling of transience. However, this can also be a starting point for an introspective quest, having the objective of searching for something that does not universally change.

Against this background the author makes a deep Japanese self-reflection, and a kind of stoicism can be felt everywhere in the book. This lends quite a tense atmosphere to the issues taken up in the book, which is a trial to explain and help readers to understand "Japanese accounting," which can be considered as the child of the Japanese economy after the War.

This is a genuine and orthodox research work that analyzes the intrinsic nature of Japanese financial accounting. The author mentions in the preface that she intends to explain Japanese financial accounting in relation to the accounting environment, such as the users of accounting information, the legal system, etc. The approach the author takes is materialistic in the sense that she analyzes environmental factors behind the social events. Additionally, the book has an international perspective because it includes an international comparison of Japanese accounting with other accounting models.

The book is divided into three main parts which reflect three different research approaches.

The first part (chapters 3 and 4) analyzes the environmental factors that shaped Japanese accounting practices. The second part (chapters 5–8) consists of a positive analysis concerning the particularities of the Japanese accounting system and practices in an international context. The third part (chapter 9) demonstrates that certain elements of the Japanese accounting system may be applicable in countries in transition.

**The International Journal of Accounting, Vol. 34, No. 1, pp. 155-172** **ISSN: 0020-7063.**

The first and the second chapter introduce the topics of the book and advance the main reasons for the research project. The major objective of the book is to search for the main environmental factors that have shaped the Japanese accounting system, together with its major characteristics, in order to find out whether there are intrinsic reasons for its adaptation to the international harmonization process. The analysis starts by pointing out that the most important environmental factor that influences Japanese accounting is the financial control mechanism in Japanese enterprises. The particularities of the Japanese accounting can be explained by the historical fact that the main banks control the management of their customer firms with an exclusive authority.

The third chapter gives extensive historical and theoretical analyses of this specific role of banks in the Japanese business system. The next chapter elaborates on their impact on the accounting practices of Japanese firms. The first section deals with the historical development of the Japanese accounting system within the framework of corporate governance. The second section treats the organizational mechanism and market that act as factors restricting the behavior of corporations. The third section is an analysis of the relationship between the company's main bank and its particular accounting practices. The central part of this chapter seems to be the third section. However, the relationship among these sections is not clear. In my personal view, most of the first and second sections should either have been omitted or relegated to footnotes. In this way, the development of the subject would have become more logical and easier to read.

The fifth chapter may be one of the chapters where the author's aspiration is felt most strongly. Here the author analyzes the main objective of Japanese accounting and how its characteristics have been shaped during the rapid economic growth era. At first, the author clarifies the process by which the objective of the Japanese accounting system changed in its nature in a manner corresponding to the functions of the main bank system and the cross-ownership of stock. Then the author points out that the main bank system has had a great influence on Japanese accounting practices, since the main bank has a dual function, one as information user and one as information producer. The author also makes it clear that the Japanese taxation system, entailing the conformity between financial and taxable income, and the accrual principle have created the uniquely Japanese set of accounting practices. Finally, the author points out that the Japanese accounting system and practices thus created are perfectly in accordance with the economy of the rapid growth era.

Chapter six presents a positive analysis of the differences between the accounting systems in Japan, the United States, Great Britain and Germany and shows the impact of such differences on the equity capital ratios and the profit ratios of corporations in each of these countries. Concretely, the author selects the top 50 companies according to sales as a sample in each country, controls structural differences between the accounting systems that are reflected in the financial statements, and measures the effects of the differences in the accounting systems on the equity ratios of the firms in each country. As a result, it turns out that the equity ratios of the Japanese firms are underestimated because of Japan's retirement benefit system and the general conformity between financial and taxable income.

Chapter seven focuses on a comparative analysis of U.S. and Japanese companies. There it becomes evident that the main bank system has a considerable impact on the

investment decisions of Japanese enterprises. Japanese firms tend to make investment decisions in plant and equipment regardless of general investment indices due to their strong relationship with their main banks. As the result, corporations have a very low level of consciousness of investment efficiency, and an economic environment has been created in which Japanese enterprises choose accounting alternatives that are preferred by the main banks, without regard to the needs of shareholders. This explains also the low disclosure level, which is said to be one of the characteristics of the Japanese companies' behavior, and which is discussed in chapter eight.

When we consider the relationship between a company and its main bank as an organizational arrangement, fund raising by the company becomes internalized. In this arrangement, the main bank collects data and produces information on customer firms as a special intermediary between firms and fund providers. Thus, the main bank acts as a link between management and stakeholders. This fact explains the low disclosure level of Japanese enterprises.

Chapter nine is a peculiar one. While "Accounting in Japan" remains the main topic of this chapter, the author actually discusses the accounting problems of economies in transition, namely, Hungary and China. The author assumes that, in view of the accounting environment that produced the Japanese-style accounting system and practices in a period of rapid economic growth in Japan, the specific factors seen in Japanese accounting must be also applicable under similar economic conditions in other countries. The result of the study indicates that, in economies in transformation, both the Japanese-style elements and IAS-type elements can be observed. This conclusion implies that the Japanese accounting system has a certain common character shared with other systems.

Chapter ten summarizes the specific characteristics and issues related to Japanese accounting based on the research conclusions presented in the previous chapters. The author concludes that the country-specific system of corporate governance and of finance through the main banks which has shaped Japanese accounting for decades has been collapsing in the recent Japanese economy. Hence, it is necessary to promote shareholders as the main constituent of the new governance system and that the harmonization with IASs, which place importance on the information value to shareholders, has a rational ground in the Japanese economy. The author therefore takes it to have been proven that the international harmonization process currently taking place in Japanese accounting is caused primarily by this internal phenomenon in present-day Japan.

The problem presented and solution offered in the book are simple and clear. They give an important and effective insight into the future prospects of Japanese accounting. However, it cannot be denied that there certainly remain some points that need to be clarified. One of these points is the extent to which the problems can be so simplified, as is done by the author. While it cannot be denied that the environmental factors that have shaped Japanese accounting have had their roots in the main bank system, it may not be incorrect to suggest that more complex factors act on different levels within the accounting environment. In other words, as the author herself points out, these factors may include tax policies, industrial policies, Japanese *keiretsu* and equity ownership. Unfortunately, she does not clarify how these factors interact with the main bank system, and what their possible impact might have been on the Japanese accounting. In addition, when we consider that the trends toward international harmonization are

derived from the globalization of the economy and the political relationship with IOSCO, it may be more practical not to cling to the issue of internal reasons for the harmonization process in Japan.

Taking all the above-mentioned points into consideration, I nevertheless strongly recommend this book to all those interested in accounting research who know the Japanese language, since I found several attractive aspects of the author's problem awareness and in the viewpoint and conclusions offered in the positive analysis section in this book.

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**Internationale Rechnungslegung,** *by Bernhard Pellens with the assistance of Andreas Bonse, Rolf Uwe Fülbier, Joachim Gassen and Silke Sürken, Schäffer-Poeschel Verlag, Stuttgart, Germany, 1998, second edition, xxviii + 590 pp.*

The author of *Internationale Rechnungslegung* (International Accounting) states that "Germany is on the verge of largely adopting the Anglo-American accounting system" (p. vi). Thus, one might wonder why the book review editors have selected this text for review. I believe there are three sound reasons for their decision. First, it behooves a truly international journal to introduce pioneering books written in languages other than English to its predominantly Anglo-American audience. Second, besides covering the differences between U.S. and German accounting practices, the book provides a glimpse of contrasts between U.S. and German textbooks and tertiary education philosophies. Third, it presents a perspective of international harmonization that is at times somewhat shortchanged in publications written by Anglo-American authors.

The intended audience of the book is not as explicitly stated as in U.S. publications. On the one hand, the preface makes reference to upper-level/graduate students. On the other hand, it states that a knowledge of international differences is essential for making constructive contributions to the discussion about an "optimal" international solution to accounting issues. This somewhat diverse audience of students and practitioners shaping the future of the profession can be traced to the fact that the distinction between textbooks and professional books is not as pronounced in Germany as in the United States. German students are expected to read the professional literature, and professional accountants frequently refer to publications we might classify as "textbooks." Overall, I believe that this publication can be called the first international accounting "textbook" written in German.

The reader of this review might wonder, therefore, why a German textbook on international accounting has not been authored previously. There are two explanations for this "omission." First, European universities traditionally have not relied as much on homework assignments in "required textbooks" as their U.S. counterparts. Second, the professional literature, doctoral dissertations, and even "intermediate textbooks" in German speaking countries have covered foreign and international accounting developments typically in more detail than corresponding U.S. publications. Thus, there has not been as much of a need for a free-standing "international accounting" textbook. Daimler's decision "to

subjugate itself to U.S. accounting standards" (p. v) by having its shares traded on Wall Street, the exposure draft of a law making it easier to raise capital abroad, and the increasing orientation toward shareholder value have now demanded such a textbook.

Readers familiar with the "International Accounting Matrix" for defining the dimensions of "accounting" and "international," respectively (see Kubin, 1995), should be aware that Pellens intentionally focuses only on "financial accounting and reporting." International aspects of managerial accounting, tax, auditing, and accounting information systems are touched upon only sparingly, if at all. He uses the term "international" to include (1) "supranational" pronouncements (primarily those of the IASC and the European Union), (2) "national [i.e., German] standards governing international business activities" of corporations subject to the accounting provisions of the German Commercial Code, and (3) "foreign practices [U.S. GAAP] concerning international reporting issues."

Despite its length, the book consists of only four chapters, three of which are overly long: (1) The Significance of International Accounting, (2) Accounting in the U.S., (3) International Harmonization of Accounting, and (4) Possibilities for International Harmonization from a German Perspective. An organization of chapters by international accounting issues, such as deferred taxes, that would discuss the differences between German, EU, IASC, and U.S. standards and analyze potential harmonization methods, could have avoided some of the redundancies among chapters 2–4. Except for a comprehensive case study dealing with the restatement of German GAAP financial statements into statements conforming with U.S. GAAP and IASs, respectively, the book does not contain any review questions, exercises or problems. Since European students are expected to "have read the literature" by the time they embark on their comprehensive examinations, the text contains a fairly long bibliography that also includes many books and articles written in English. Given that the text makes reference to the increasing importance of "shareholder value" and analyzes current U.S. developments as indicators of things to come, Alfred Rappaport's seminal book, *Creating Shareholder Value* (1986), and the Jenkins Committee Report (AICPA, 1994) should have been included in lieu of some entries describing superseded or amended U.S. accounting standards.

The discussion of the significance of international accounting (chapter 1) is similar to the treatment in English language textbooks on international accounting. Among others, Pellens points out that, even after the harmonization within the European Union, the net income of hypothetical companies with identical transactions can result in significant differences, depending on the country of incorporation. His emphasis on the reduction of the informational asymmetry as the central function of accounting (p. 8) and his framework for analyzing the rights, obligations and enforcement options of the various stakeholders (pp. 20-24) reflect an economic and legalistic perspective not often found in U.S. textbooks.

The book-length second chapter (over 300 pages), devoted to "Accounting in the U.S.," covers (1) the basics of commercial law, (2) the SEC and FASB, (3) the conceptual framework of accounting, (4) selected FASB standards and (5) disclosure requirements. It provides a unique blend of (a) interesting, albeit trivial, tidbits (e.g., Louisiana is the only state that has not transformed the Uniform Commercial Code into state law) and important facts, (b) a somewhat superficial treatment that is subject to potential misunderstanding (e.g., the GAAP hierarchy (especially p. 117) and accounting for advertising expenditures (pp. 170-171)) and an in-depth coverage comparable to

that of U.S. intermediate or advanced accounting texts, (c) theoretical discussions and numerical examples, and (d) superseded (e.g., accounting for investments of less than 20% (p. 259)) and very current standards. Its strength lies in frequent comparisons between U.S. and German GAAP. At times, I missed critical comments about both U.S. and German accounting norms (e.g., that the German limitation on dividends results in a suboptimal allocation of the scarce resource "capital" (p. 128)).

The third chapter, International Harmonization of Accounting, provides a good overview of the issues encountered in harmonizing accounting and discusses the efforts of the EU, OECD, UN, and the IASC. In the deliberation about different definitions of "harmonization," I expected to find a reference to "harmonization as a means of globally improving the decision usefulness of financial information." The coverage of the IASC (90 pp.) is very thorough, exceeding that of most international accounting texts.

The final chapter elaborates on alternative methods for companies to report in accordance with German statutory requirements and U.S. GAAP or IASs. Pellens points out that a blanket acceptance of U.S. GAAP or IASs as "German accounting standards" would conflict with the laws of the European Union and raise several constitutional issues. The discussion of German opportunities for influencing the IASC's standard-setting efforts reflects a realization that further harmonization is essential and that Germany needs to participate more actively in those harmonization efforts. However, the tenor may seem at times unnecessarily confrontational to persons unfamiliar with argumentative exchanges of views and could undermine the effectiveness of the German representatives.

The discussion of the draft legislation that permits certain companies to publish their consolidated statements in accordance with German, U.S. or IASC standards and of the AIMR study on *Financial Reporting in the 1990s and Beyond* (Knutson, 1993) is very informative. Pellens' proposal to allow the "market for accounting systems" to determine the "optimal solution" for the international harmonization of accounting is very intriguing. However, the negative consequences of leaving it up to the companies, i.e., top management, to choose the accounting system for presenting the financial position and management's results of operations needs further analysis.

Overall, Pellens and his team deserve to be congratulated for the Herculean task of writing this book. I encourage everyone with German language skills and who is interested in the harmonization of accounting to read it. Even the chapter on U.S. accounting may provide a new perspective on some otherwise familiar topics. Whether Germany is indeed on the verge of largely adopting U.S. GAAP remains to be seen. For now, U.S. corporations considering the acquisition of a German company should be aware that virtually all prepare their consolidated statements in accordance with German statutory accounting standards, which may differ significantly from U.S. GAAP.

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**Cost Management in World Practice,** *by Alicja Jarugowa, Wojciech Andrzej Nowak and Anna Szychta, Ośrodek Doradztwa i Doskonalenia Kadr, Gdańsk, 1997, 151 pp., about $15.00.*

The improvement of methods and tools of company management in Poland in order to ensure the effective operation of companies is required by both the increasing complexity of economic processes and the system changes in the Polish economy. This is the reason why sophisticated cost management is extremely important, especially for Polish enterprises, which frequently incur excessively high costs and therefore have a bad competitive position in the national and international market.

Today, Polish enterprises usually use traditional cost accounting, which does not provide a sufficient basis for effective cost management. Therefore, the objective of this book, which is a reader with articles written in Polish by three authors, is to improve the knowledge of modern cost accounting which is necessary for cost management and to explain the appropriate tools to Polish readers. The authors outline their intention in the introduction of the book, which is to "satisfy the needs of companies' managers through showing and explaining the worldwide trends in the development of management accounting" (p. 6) and present practical examples of modern methods of cost management.

The book consists of eight chapters. The first discusses the change in management accounting's role currently in progress which shows an increasing need for cost managment. To the authors it becomes obvious that the role of cost accounting depends on the economic and social framework of a particular country and also on the particular time conditions. This dependence is shown in the second chapter when they describe the cost management methods used by Japanese enterprises. In the same chapter, both the conditions that are necessary to establish efficient cost management and modern cost accounting methods are presented. Those methods are explained in detail by also providing quantitative examples in the following chapters 3–6. Those are activity-based costing (ABC), target costing, quality costing, and life cycle costing. The last method represents a new approach in cost management. It shows the need for taking into account the costs already incurred prior to undertaking the activities aimed at introducing the product to the market, as well as taking into account the different cost distribution patterns and the influence on accounting profit at particular stages of the product's life cycle.

The seventh and eighth chapters describe the cost management methods that promote the optimization of costs, which are the search for the best practice (benchmarking) and control of the achievement of cost and management objectives (cost control). Although the title of the eighth chapter is "Controlling and Accounting," the author concentrates primarily on control issues and covers the relationship between management accounting and management control very poorly. It would have been very intersting if more attention were paid to this relationship and its description, because this is a problem that still causes controversies not only in Polish companies but elsewhere.

The major advantage of the book is that it presents and explains the current concepts of cost management that are currently being used worldwide. To promote a better understanding, several illustrations with quantitative examples are provided. However, it is regrettable that, in particular chapters, the authors have not accepted the same writing rules. Some of the chapters end with a "summary," some with "final remarks," and others do not have any formal ending. But, in total, this formal deficiency does not diminish the merit of the work.

As the table of contents shows, the book under review is organized by topics. This allows the reader to become familiar with both the newest cost accounting methods and opportunities of their application to cost management. That is why the book should be interesting for a wide range of readers, from company executives to managers who create and use the modern management accounting systems and cost accounting, and including researchers and students. They can all profit from reading this book.

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**Transnational Accounting, TRANSACC,** *edited by Dieter Ordelheide and KPMG, Macmillan Press Ltd., London, 1995, 3,225 pp., approx. $350.*

*TRANSACC* is a major European publication on comparative international accounting. In my view, the book is intended for students, researchers and professionals; however, its sheer size (2 volumes totaling 3,225 pages, in addition to an index of 52 pages) could be off-putting. While being more detailed, the book is structured along similar lines to those of previous authors, such as David Alexander and Simon Archer (*European Accounting Guide*, Harcourt Press, San Diego, 1995) or Simon Archer and Stuart McLeay (12 country volumes in the European Financial Reporting Series, Routledge, London)—an approach based on country studies with a standardized summary for each country.

The publication deals with the accounting rules and practices for industrial/commercial corporations, thus excluding the banking, insurance and public sector requirements. Individual and consolidated accounts are dealt with in separate sections. The two volumes cover ten European countries plus Australia, Canada, Japan and the U.S. in addition to two

separate chapters on the European Union and the International Accounting Standards Committee (IASC).

The information on individual countries and the IASC is summarized in a reference matrix (67 pages), and a glossary of 61 pages is also included. The reference matrix provides a useful comparative summary of the 14 countries, plus the IASC, in tabular form, which allows for a quick assessment of specific accounting practices and problems (i.e., "recognition," "evaluation," etc.). As with the whole book, the presented reference matrix is divided into two parts, one for individual accounts and one for group accounts.

To enhance the comparative analysis, the authors of the reference matrix (Dieter Ordelheide and Anne Semler) make use of the symbols "R," "A," "F" and "0," whereby

R = Required/recommended
A= Allowed
F= Forbidden
0= Not relevant,

and each element of information so classified is cross-referenced to other sections of the two volumes in which the point is developed in more detail.

While the above classifications are very useful for making comparisons, the "R" symbol, which encompasses both a "requirement" and a "recommendation," could give rise to confusion and non-comparability in regard to certain accounting practices in different countries (i.e., the treatment of pensions, leasing, etc.).

The glossary prepared by Hanne Böckem and Thomas Schröer includes two parts: the first provides the definitions of some 244 English (accounting) terms, and the second presents a translation of the terms into seven other languages (Danish, Dutch, French, German, Japanese, Spanish and Swedish). This multi-lingual glossary is very practical and "user-friendly" since it is presented in tabular form (38 pages) and, in my view, adds value to the publication.

In choosing which countries' financial reporting practices to consider, the authors' criteria include: "developed" and "stable" economies and those with "developed capital markets" open to foreign investors. These criteria exclude Central European countries, certain Southern European countries (Greece, Italy and Portugal) and certain Northern European countries (Finland, Iceland and Norway). As these countries' economies and accounting practices develop, it would be interesting to know more about them. In future editions of this book, perhaps, "collective" chapters could be added on these countries, and/or reference could be made to them in the chapters on countries that are closely related (i.e., geographically, linguistically, culturally, etc.).

In the preface, the authors emphasize that the main objective of *TRANSACC* is to present current accounting and financial reporting practices in selected countries—in the form of a comparative study. It is this reviewer's opinion that this objective has been attained, particularly with the global reference matrix referred to above. This being said, one feels that certain of the country studies are not treated in the same detail as some of the others.

In order to achieve comparability for each country study, a standardized structure is followed by each contributor, as follows.

**Individual Accounts**

I. Introduction and background
II. Forms of business organization
III. Objectives, concepts and general principles
IV. Bookkeeping and preparation of financial statements
V. Balance sheet and profit and loss account formats
VI. Recognition criteria and valuation
VII. Special accounting areas
VIII. Revaluation accounting
IX. Notes and additional statements
X. Auditing
XI. Filing and publication
XII. Sanctions

**Group Accounts**

I. Introduction and background
II. Objectives, concepts and general principles
III. Group concept and preparation of group accounts
IV. Consolidated group
V. Uniformity of accounts included
VI. Full consolidation
VII. Proportional consolidation and equity method
VIII. Deferred taxation
IX. Formats
X. Notes and additional statements
XI. Auditing
XII. Filing and publication
XIII. Sanctions

The country studies average between 150–200 pages and resemble the European Financial Reporting Series edited by Archer and McLeay. A list of book references is given for each chapter, but no specimen documents or examples of account formats are given in appendices. However, there are many informational tables inserted in the chapters, giving details on such matters as types of corporate structures, number of listed companies, sources of finance, charts of accounts, accounting principles, contents of the notes to financial statements, the standard format of financial statements, etc.

In the section on group accounts, the authors make reference to the latest practices in each country, but they do not give examples of the types of information published by corporations.

The section on the European Union (4th and 7th Directives), which follows the same approach taken for the country studies, is very useful, in that it informs the reader of European legislation and, more importantly, provides a comparative benchmark for each European country study.

As for other publications on comparative international accounting, certain current issues, particularly the question of information made available to shareholders, are not dealt with in any great detail. For such issues, and for major developments in the IASC's policies, the reader must use other sources—academic and professional journals—to complete his/her knowledge on current issues relating to international practices.

In conclusion, this publication, the work of 36 authors, represents a significant contribution to the needs of professionals, researchers and students. While at times the reading is heavy going, the publication is comprehensive in coverage and the quality of information contained therein fully justifies the price.

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**FEE Comparative Study on Conceptual Accounting Frameworks in Europe,** *Fédération des Experts Comptables Européens, Brussels, May 1997, 73 pp.*

This study by FEE aims to discern the conceptual accounting frameworks in Europe, and to see if they have come to be harmonized by the recent implementation of the Fourth and Seventh EC Directives. The "accounting philosophies" developed in Europe for individual and consolidated financial statements are analyzed for the 15 EU countries plus the Czech Republic, Norway, Hungary and Switzerland.

After describing the economic, social and legal environment in which accounting has developed in Europe, the FEE study describes the "philosophy and objectives," explicit and implicit, behind the Fourth and Seventh Directives. With reference to the Fourth Directive, the main subject of the study, the explicit objectives underlined by the authors are "to protect members and third parties" and "to inform the public," while the implicit objectives are represented by "assessment of taxable income" and "stewardship of management." In order to implement these objectives, the Fourth Directive contains "underlying purposes of preparing financial statements," "concepts underlying the preparation of financial statements," and "accounting principles and valuation rules." These subjects form an important part of the report, with many references to both the Directives and national interpretations thereof. Two appendices, the former on the regulatory framework in each country and the latter on each country's objectives of financial statements, close the study. The data for the appendices were gathered by questionnaire.

The study concludes that "In most countries, the accounting solutions to specific issues are difficult to find and are sometimes inconsistent even if there is a conceptual framework." It adds: "Despite the accounting harmonisation achieved by the Accounting Directives, numerous different concepts and interpretations still exist in EU Member States and explain persistent important differences in accounting practices" (p. 11).

To be sure, the fact that accounting regulations differ from country to country has been widely recognized for a long time, especially where differences occur among States very near each other, as happens in Europe. Some researchers have attempted to classify States according to these differences. Even more interesting is the effort to understand why such differences occur; according to Nobes (1998), about 20 reasons are cited in the literature.

The FEE study confirms that major differences in Europe persist even after the national laws were amended to reflect the Directives. Interestingly, the FEE study links similarities and differences to the existence of a conceptual accounting framework, as "the assumption is that the differences in national accounting treatments of like transactions and events result from differences in national accounting frameworks" (p. 3).

Accounting frameworks are relevant, according to the authors, to coordinate the development of standards. And they can be important also to have better "accounting comparability at a European level" (p. 11) and to have more influence in the international accounting standardization process (p. 3). The conclusion of the study is that conceptual frameworks exist in Ireland, the U.K. and the Netherlands, while in Germany "there is reference made in the law to the principles of proper accounting." In most of the other countries

> "it is difficult to demonstrate the existence of national accounting frameworks because there is no common understanding of the prevailing accounting concepts and principles behind the law. Regulations on accounting treatments have often been subject to case by case solutions responding to a particular situation at the time without having any consistent and fundamental accounting concepts in mind; this can often be explained by the strong link to the prevailing fiscal framework" (p. 6).

In sum, a European framework is very far away. However, something can be done by concentrating on consolidated accounts, which are less influenced by tax rules. The authors of the study strongly emphasize the link between tax and accounting, which they see as one of the main reasons for differences in the practices among countries.

The study considers, therefore, a theme debated for a long time, namely, accounting differences among countries, and links them to the existence of national (and multinational, if any) frameworks. In order to examine the theme, an interesting and well-documented analysis is performed. Even if it is very difficult to summarize complex national contexts in a few lines, the FEE study might help practitioners to understand national situations more clearly. The study could also be of some help for teaching purposes.

As always happens when dealing with international comparisons, the chosen research perspective inevitably influences the results. In this case, considerable importance is placed on an interpretive approach based on two concepts, "framework" and "standard," which are not part of the rhetoric of most countries in the EU. This leads to a measurement of national experiences by use of a yardstick not in harmony with the countries' culture and accounting tradition.

International financial markets certainly need a greater degree of comparability and transparency, which might require limiting references to a single framework. However, international financial markets are not of interest to all firms in a country; therefore, an effort to characterize all financial reporting issues according to such a perspective might not be useful. The influence of the specific world-view adopted in the FEE study is confirmed by its focus on an already-existing framework, namely that recommended by the IASC, which is clearly promoted by the authors of the study (p. 11).

In terms of follow-on research, many questions arise again, such as:

- What do firms really do in practice?
- Is it really possible, and useful, to harmonize financial reporting for non-multinational companies?
- How do the national regulatory systems work?
- Does accounting regulation influence the type of accounting used in a country, or the other way around?
- What means are used in each country to enforce accounting rules, what happens to non-complying companies, and how does all of this matter when seeking to understand companies' behavior?
- Is it really useful to classify countries?; how do the different reasons proposed by the literature to explain national differences relate to one another?
- Could other methods also be useful in comparative accounting research, such as those sometimes referred to in the social sciences as "variation finding" or "encompassing"?

What is certain, and the FEE study confirms it, is that no rule, and no European Directive, could be effective in making all firms around the world adopt the same accounting norms. With reference to the financial reporting field, therefore, what Ritzer (1996) calls "the McDonaldization of society" seems very unlikely to occur—at least with respect to companies in general. As to the large, world-class, listed multinationals, something different is emerging. But this is another story, in some ways told also by the authors of the FEE study.

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[JOURNAL EDITOR'S NOTE: The following book review was accepted by the previous book review editor, Belverd Needles.

**Macro-Accounting and Modern Money Supplies** *by G. A. Swanson, Quorum Books, Westport, CT, 1993, 184 pp, $55.00.*

In this book, the author presents a new methodology for examining certain economic aspects of higher-order human systems such as modern societies and supranational systems. The author has termed the methodology macro-accounting because it concerns global economic effects and recognizes the central position of accounting documentation of executory debt contracts in modern exchange economies. It's common belief that modern economic analysis for policy, administration and operational decisions may be enhanced by recognizing the fundamental accounting nature of modern economies. Throughout this high quality book, many important concepts and procedures are revealed for analyzing modern economic processes, mainly from the macro perspective-the society perspective.

The author has written this book for both theorists and policy-makers. The book presents enough analysis for a serious scholar of higher-order human systems. It also reveals numerous insights that should interest policy-makers at various levels of government and industry. According to the author of the book, these insights suggest that extensive macro-accounting analysis of modern economic processes may contribute to their evolutionary refinement.

The book consists of nine chapters. The order of the material follows an advancement of arguments that makes the whole book well documented and affordable to the public interests.

The first chapter, an Introduction and overview chapter, sets the terms of modern societies and prescribes the systems in which economies operate. The whole book starts with the following excerpt: Economies are physical phenomena. They are built by humans, may be

destroyed by humans, and can be examined by empirical scientific methods. No mystical unseen hand guides them. The author considers that modern market societies have emerged as predominantly debt-monetary systems which arise from accounting documentation in absence of money-information markers with an influence on the economic production and distribution process. In a system theory perspective, it's about economic exchanges in a coupling relationship (outflow from one entity is the inflow to another and vice-versa). Living systems theory (LST) is the cornerstone for the whole development of the book with living systems identified as certain forms of life on a hierarchy differentiated by levels of complexity and related by the common cosmological origin and development of all life. LST provides the backdrop for discussing macro accounting. But in Western economies, the important role of accounting in modern economies has all but ignored, so that accountants themselves do not know what many derived accounting variables mean in terms of the concrete systems they monitor. Worth noting the author's assertion concerning the full absence of a clear connection between assets, liabilities, revenues, expenses, the like, and the various forms of matter-energy flows in the concrete processes of modern economic entities up to date. The conceptual framework for such a connection as it opens through this book, is based on some essential ideas such as (i) the irreducible unit of economic process is the exchange; (ii) combinations of exchanges generate complex modern economic processes; (iii) monetary processes emerge from executory contracts documented by accounting instruments that separate the reciprocal transfers of trades on the time continuum; (iv) accounting instrumentation of debt is the basic form of modern money.

Chapter two provides all necessary clarification along with all details that serve to establish synthesizing and analyzing powers. It clarifies at the outset the aspects of economic processes with the main concern focused on the universe of concrete (physical) systems, that is, what those systems are and how they are observed with the word "system" defined as any set of related and interacting elements. The author denotes that discovering the boundaries of concrete social systems is far more difficult than in other physical science levels. Besides, these systems are characterized by increasing complexity provided that social scientists neglect comparing objects to scales justified by the fact that objects being observed are relatively dependent on observers. Then, distinguishing between measurements and interpretations of those measurements is of critical value. These are the most particular aspects of social processes that concern macro accounting.

Chapter three further delimits the subject of this book by defining important ideas about accounting methodology, especially measurements within that methodology, in the context of concrete processes. This chapter discusses important ideas as an answer to all technical aspects of the modeling process of accounting, that is, what is accounting, double-entry and double classification, homomorphic expressions of concrete measurements, the ratio monetary scale and the basic double-entry measurement model. Accounting measurement scales and models are used to map the concrete processes of organizations. The question, What is accounting is set forth in terms of the difference between accountancy and accounting with the appropriate answer being the basic accounting systems which are concrete living systems. As such they are composed of people, machines, electricity, and many other concrete elements as well as abstracted systems including words and symbols in books and accounts, computer memory configurations, and mathematical equations. Those information systems as concrete systems perform the vital and, sometimes, inseparable functions of measurement and data reduction. Some aspects of data reduction are collapsed

into measurement to form a four-dimensional (spatiotemporal) measurement scale. Then, double-entry mapping is used as the consummate form of economic exchange process measurement because it measures both the inflow transaction and the outflow transaction of an exchange. In opposite, double classification is by no means consummate provided that different general classifications may include, among other things, measurements and assessments made of various physical attributes on several scales. The entries are measurements describing processes (exchanges), not structures. The accounting measurement model, including its entry rules, converges on the global-derived process measurement net matter energy. Matter energy is defined as a quality that describes the extremities of a continuum of physical forms that are commonly termed goods and services. By an accounting measurement model converging on net matter energy, a global measurement of matter-energy outflow can be calculated. The term matter-energy outflows is defined as the union of the set of all classifications of measurements (on the spatiotemporal accounting scale) of forms of matter-energy outflows. Worth noting that the calculation of the global measurement matter-energy outflows mitigates the cost problem. It also provides a benchmark to evaluate the results of the allocation methods used to associate costs with outflows of products and services. In operational accounting models, there are process accounts and residual accounts. The author suggests that residual accounts should be divided into two accounts, one for inflows and one for outflows, arguing that such a simple action would transform all accounts into process-aggregating accounts.

Chapter four introduces a methodology termed macro accounting for using similar ideas to examine the higher-order economic processes of societies and supranational systems. This chapter extends the basic accounting discussed in chapters 1–3 to the higher-order human systems. It discusses differentiating higher-order living systems on concrete economic processes, why money economies require double-entry mapping, debt money, and a macro accounting analysis method. How money emerges from debt, and how "supra money" emerges from foreign exchange are discussed. Three orders of higher-order living systems are set along with corresponding constraints. The orders are societal component, society, and supranational system with consequent differentials. Money-information markers (MIM) is an artifact that is linked with a double-entry methodology. In particular, MIM as a form of monetary artifacts consist of relatively small bundles of matter-energy that bear monetary information about specific exchange values and are ultimately exchangeable. MIM may be classified as various forms of both currency MIM (coins and bills, electronic transfers of funds, and checks) and time-lagged MIM (promissory notes, stock certificates, and Accounts Payable accounts). Modern exchanges include reciprocal transmissions of time-lagged MIM and currency MIM. In the most fundamental form, MIM are introduced to document lags and leads between transfers in trades. The typical documentation in modern economies concerns debt. And, no one of the orders of higher-order living systems can survive long without a clear record of its debt obligations and rights. According to the author, that record is borne on MIM which influences the formation of economies. Traditionally, only currency MIM are popularly recognized as money. However, the fact that time lagged MIM have characteristics of money and that debt, indeed, underlies modern money has been widely recognized. What is still in debate is that the debt foundations may be connected directly to the global supply of currency MIM. This connection is to be made by macro accounting. The macro accounting analysis method which is also expressed by a symbol notation and by graphic presentations takes the form of a chain of

exchanges with a map of economic processes initiated by a labor-consumption entity. The chain begins with a time-lagged MIM flows of production entities. There is, also, an outflow of the time lagged MIM and an inflow of labor-consumption entities. The reciprocating transaction of the first exchange is represented by a transfer of matter-energy forms from labor-consumption entities to production ones. The second exchange in the chain begins with a transaction of the time-lagged MIM from the labour-consumption entities to society. What is interesting is that the chain forms a circuit back to where it started. However, the chain of linked exchanges is closed. Besides, an important economic inference is that any refusals on the possibility time-lagged MIM constructed to initiate the chain of exchanges to be destroyed in the end, drive up prices of existing goods-services.

Chapter five analyzes basic economic processes within societies. The macro accounting methods developed in Chapter four are used to study the effects of various ways of introducing money information markers into economies. The chapter demonstrates how accounting documents of debt obligations form the fundamental money-information markers and how societies introduce currency money-information markers based on the debt markers. These actions are illustrated with fourteen different situations. The purpose of the analyses is to examine the initial effects of different ways of generating money-information markers (MIM) rather than the total effects of an event that may degenerate into results that reflect arbitrarily designated probability functions more than they describe or map empirically confirmable patterns of concrete elements. Nevertheless, public policy makers should be concerned with initial effects because they are the most predictable. Besides, the author argues that it is purposeful to examine initial effects rather than total effects provided that policy makers are attempting to correct certain imbalances in existing economies (e.g., consuming and producing processes) rather than constructing a new economy. And, policy makers' actions are designed to achieve certain specific adjustments rather than a global set of relationships. The latter is a matter of the dynamic of trade. Interestingly, specialization and the resulting division of labor in modern economies are connected to the phenomenon of separating temporally the reciprocating transfers of goods and services by intervening transmissions of MIM. The role of MIM in the economy is examined through determinate and dynamic economic processes as composed of chains of exchanges. Both determinate and dynamic processes introduce currency MIM into economies over definite periods. Economic policy issues can be decided upon strong signals provided by currency MIM, for example, introducing currency MIM at higher rates through societal loans to consumers may provide signals that are too strong. The resulting monetary information overload may cause hyper-inflation. Therefore, societies possibly should not finance consumer loans directly as a general policy. In addition, controlling consumer and production loans requires information about the executory contracts underlying time-lagged MIM transmitted to societies.

Chapter six discusses dynamics introduced into modern economies that provide motives to accelerate economic activity. It examines introductions of the additional dynamics: interest, taxes, rent, royalties, dividends, and profit. Those dynamics are additions to fundamental market economies. It demonstrates that their influences can either compound or mitigate the effect of the basic trade dynamic. These additional components become typical motivators in debt-monetary economies. They are introduced into advanced modern economies to increase economic activity beyond that motivated by the basic trade dynamic and the negotiability of time-lagged and currency MIM. Most motivators are production

oriented. Only profit is distribution oriented. The author places an emphasis on the grand challenge of the early twenty-first century economics focused on how to organize debt-based economies within societies in a manner that prevents the collapse of societies into organizations. The chapter illustrates the introduction of these dynamics with ten different situations.

Chapter seven presents simulations of dynamics of introducing different motivators in various ways. Because the systems are complex and interacting, the results are sometimes counterintuitive. Some of the general effects demonstrated in the simulations raise fundamental questions about the concrete process feedback in modern economies. It's about some inferences concerning relationships between interest, production, debt, profits, cost of factors of production, discretionary currency, etc. The author develops questions of particular current importance such as: Must the debt that society holds continue to increase if interest, profit, and increases in costs of production are allowed? Why is the "national debt" borrowed instead of loaned? If the Federal Reserve Board owes more debt than it holds, where is all the money coming from?

Chapter eight extends the macro analysis to multiple societies and emerging supranational systems. It discusses the basic foreign exchange circuit, the effect of a price increase in one society, limitations of freely fluctuating foreign currency exchange rates, the unequal treatment of members of societies permitted by supply-demand-controlled foreign currency exchange rates, a world order, foreign reserves and supra-money and private debt-initiated trade. A macro accounting analysis of exchanges involving the currency money-information markers of two different societies provides interesting insights into the effects of changes in the rates at which societies exchange currencies within supranational systems. The analyses have shown how actual foreign exchange rates emerge from prices within societies, how different levels of economic development can cause price differentials between developed and developing countries, and the effects of fixed and changing foreign currency exchange rates. It has suggested that the current monetary system fosters an international privileged class of individuals at the expense of society members. Some pitfalls of fiscal deficit financing by governments with foreign debts were discussed, and the introduction of supra-money as an accounting device was suggested. With the frame of reference being modern market economies, the author denotes that changing foreign currency exchange rates can keep the effects of price changes occurring in one society from being transmitted to another. In case of managing foreign currency exchange rates indirectly, chánging foreign currency exchange rates is not an easy solution to problems of currency manipulation of individual societies and, thus far, no inherent reason for not directly managing foreign currency exchange rates exists in debt-based monetary systems.

Chapter nine, the final chapter, pulls together important insights into modern economic processes and for policy decisions developed and discussed throughout the book. Nowadays, the dominant form of modern money is debt money provided that the largest volume of modern money is debt instrumentation. Undoubtedly, this is a reality. What if debt instruments are negotiable accounting documents. First of all, debt instruments must be executed at a specified time or they are defaulted. And, the point is that who holds the debt instrument at the moment of default suffers the loss. Maybe, for protective reasons, an important cause of the emerging higher levels of living systems may be the need for higher-level legal systems to enforce executory contracts among relatively independent lower-level systems.

In summary, the author has tried to link accounting with economic analysis pursuant to systems theory. This book is a substantive contribution to the field of accounting. It's a great challenge to all of us who deal with accounting in its multifaceted form rather than seeing it as an isolated special-purpose technique just for income determination or statement of financial position. The book is expected to be appreciated by scholars of Accounting in the framework of Economics and also, by systems theory special scholars who are seeking for fields for application. Common readers can also have an understanding of the book only when they will focus their attention on the summary paragraphs as given by the author. Besides, for more patient readers, full understanding of the book presumes carefulness and persistence on definitions and the flow of the processes as followed in model building trials.

Reviewed by Prof. A. Maggina
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# THE INTERNATIONAL JOURNAL OF ACCOUNTING

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## ARTICLES

## BOOK REVIEWS

The International Journal of Accounting

# Auditing of State-Owned Enterprises in China: Historic Development, Current Practice and Emerging Issues

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**Key Words:** Auditing; State-owned enterprises; Reform; China

***Abstract:*** *State-owned enterprises (SOEs) play a pivotal role in the Chinese economy. Together, they manage over 50% of China's national capital. With China steadily moving towards a market economy, SOEs increasingly are given the latitude to seek external funding, develop joint ventures and more generally, to operate without direct government involvement. This separation of ownership and management, in turn, has increased the need to monitor and control China's SOEs, and audits can play a key role in this oversight function. Despite the potentially important role that SOE audits can play in safeguarding the interests of the state and external investors, there is a relative dearth of research on the current state of, and challenges facing such audits. This paper provides an overview of the historical development of the SOE audit by the Ministry/Department of Finance, and current SOE audit practices performed by the State Audit Administration/Office. The main conclusion of the study is that, with ownership of the SOE being further diversified and the operation of the SOE being completely commercialized (i.e., without any political consideration), the nature of the state audit office as a government agent is incompatible with the role of independent auditor for SOEs. SOEs need a non-government third party to verify its financial statements and audit its business activities to meet the information needs of diversified interest groups in the SOE including the state, individual or institutional investors, creditors and employees etc.*

Audit of state-owned enterprises (hereafter SOEs) is an important issue. First of all, China currently has about half a million SOEs (Wang, 1995), which employ more than 50% of China's national capital. Due to their size, SOEs play a significant role in the Chinese economy. Secondly, from the early 1980s, with the enterprise reform program, most SOEs have been given increasing autonomy to make business decisions without substantial interference from the government (Chow et al., 1995; Chen et al., 1997). The controlling role of the government has diminished and new forms of financial incentives at the enterprise level have been adopted. One would expect that this change in the

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organization structure of SOE (from a governmental agency to an independent business entity) would have tremendous impact on the nature, objectives and procedures of the auditing of SOEs. Thirdly, it is important because there exists a large amount of embezzlement involving SOEs[1] and at least one-third of the SOEs are losing money. It is expected that audit may resolve and prevent these problems, or at least control dysfunctional behavior in SOEs.

Despite the widely recognized role that audits play in assuring the integrity of accounting and financial reporting, only a few studies have addressed auditing issues in the Chinese context (Huang, 1987; Lau and Yang, 1990; Skousen et al., 1990). While these studies have increased awareness and understanding of the topic, limited discussion has been provided on the recent SOEs' developments and reforms in China. Moreover, prior studies only covered general issues of auditing, such as the auditing system (Huang, 1987; Lau and Yang, 1990), auditing legislation and enforcement of law (Skousen et al., 1990), but did not attempt to discuss specifically auditing practices of SOEs.

The primary purpose of this paper is to provide an overview of SOEs' auditing practices, pre and post the restructuring of SOEs. In addition, it will examine the effects of the change in the organization structure of SOEs on the nature of SOE's audit and the issues encountering the audit profession in general.

The remainder of this paper is organized as follows. The next section provides some background on the practice of auditing of SOEs prior to the SOEs' restructuring. This is followed by a description of current practices of SOEs' audit, including some real world examples. The next section discusses some recent developments and related emerging issues in the audit profession. The final section provides a summary and conclusion.

## SOE AUDITING BEFORE RESTRUCTURING

Before the economic reforms in the 1980s, businesses in China were operated and strictly controlled by governmental agencies (state or ministry levels). Operations of SOEs were conducted according to state plans. The government and its agencies retained all investment and operating decisions. The managers of these entities had little incentive and managerial authority to enhance the efficiency of SOEs. SOE was not regarded as a mere commercial organization in the sense that its objective was to maximize profit. It was also considered as a quasi-government agent that was required to pursue the broad social, political and economic objectives of the government. Some examples of activities conducted by a typical SOE, which may not make business sense, include:

1. Employment. Consistent with the policy of full employment of the government before the 1980s, SOEs could not fire redundant or under-performing employees;
2. Production of unprofitable products. An SOE must manufacture products according to the state plans even though there are no profits for such a product or service;
3. To run unprofitable operations, such as hospital, child care, employee accommodation, etc.

In such a planned economy and financial reporting environment, the main objective of financial reporting was to provide financial information for the government to formulate and enforce state economic plans and to control economic activities. In addition to direct supervision exercised by the governmental unit directly superior to the particular enterprise, the Ministry/Department of Finance performed annual "financial examination" of SOEs. Regular audit was not considered necessary under the planned economy. In the case of central government-controlled SOEs, the Ministry of Finance was responsible for such an examination (usually performed annually). For local SOEs, the Department of Finance of a local governmental office is responsible (Lau and Yang, 1990).

The purposes of the financial examination were:

1. to ensure the compliance of business activities with government policies, economic law and regulation, tax rules or profit submission schemes;
2. to ensure the implementation of detailed state plans, such as production plans, financial plans, quotas and so on;
3. to ensure integration of state assets and funds and the proper use of these funds.

The financial examination by the Ministry/Department of Finance served as a means of direct control and management of the SOE. This was appropriate, as the cash flows of SOEs were part of the overall cash flows of public finance of the state.[2] There was an overwhelming focus on compliance with certain economic and financial rules and profit/tax submission rather than a verification of financial statements. As the SOEs were under direct control of the government, there was no need for an independent audit of financial statements by a third party who provides an independent view as to whether the financial statements are true and fair. Prior to 1980, independent audit did not exist.

## THE MAIN FEATURES OF SOES AFTER RESTRUCTURING

It has been generally agreed that the government's direct control and management of SOEs, together with other factors such as an over-centralized national economy, result in poor performance of SOEs (see, e.g., Tang et al., 1996). In the early 1980s, the government began reforming the SOEs. The objective of the SOE's reform was to rejuvenate the SOEs by giving more and more autonomy in making economic decisions and providing financial incentives to managers and employees of SOEs. Two major reforms have been adopted for SOEs. They are the contract responsibility system (CRS) and corporatization.

Under CRS, while the government retains the ownership, the SOE is subcontracted to selected individuals (managers) to independently run the firm. The managers are rewarded if the operating targets set in the contract are achieved. The financial incentives for managers include sharing of the profits in excess of the targeted amount. Unfortunately, the CRS has not been successful in improving the economic efficiency of SOEs. Liu and Zhang (1996) discuss several factors contributing to the inefficient and unprofitable operations. Consequently, the government intends to replace CRS by corporatization.

Corporatization refers to converting SOEs into companies with limited liabilities. After restructuring, the SOEs would have the following features.

1. There is increasing degree of separation of management and ownership. Although the government still retains ownership of an SOE or may have majority shares, there is no longer direct control over the SOE by the government. Most SOEs are becoming profit centers and investment centers. The decision power now is in the hands of the SOE's managers or the board of directors.
2. Except for large and key SOEs, operations of most SOEs are no longer subject to state plans. Rather, profit is the primary goal and is becoming a key criterion to measure performance.
3. SOEs are now operating in freer markets and are subject to market forces. The government no longer guarantees a market for an SOE's products and has stopped subsidizing losses incurred in SOEs. In other words, SOEs have to bear the full consequences of their operation and investment decisions.
4. The reward of the manager is often directly linked to the performance of the SOE.[3] Accounting information is widely used to measure performance.[4]
5. There is no market for stocks issued by most SOEs. Only a small number of SOEs are listed companies whose shares are traded on a stock exchange. For other SOEs, the value of the firm cannot be determined in a free market. Merger and acquisition of SOEs is not a common practice as there are political restrictions (e.g., unemployment, transfer of public ownership) as well as technical problems (e.g., no independent assessors for properties, intangible assets, etc.).

Although the abovementioned reforms have improved efficiency of SOEs (Chang, 1997), new problems have emerged. One of the problem is the self-serving management. Xiang (1998) states that

> [a]s a result of these profound changes, China's large SOEs, either corporatized or still under the CRS, now significantly resemble modern corporations in the West in that the SOEs are characterized by a high degree of managerial authority and a separation of ownership from control. As a consequence, potential agency problems have emerged.

The agency problem is more serious among the SOEs' managers as the incentive system is short-term oriented. Their primary financial reward system is linked to the profit performance. As these managers are not allowed to own shares in the SOEs they managed, there is no long-term incentive.

After restructuring, without direct control and without involvement in day-to-day management, the government has to rely on the SOEs' financial statements to make decisions. However, there are growing incentives for the manager to manipulate the financial information. The manager may inflate the profits to their benefit or provide false financial statements to conceal embezzlement and other irregular behavior. The financial statements provided do not represent the true and fair state of SOEs. As a result, relying on these misleading or false financial information may lead to serious consequences, such as

the loss of state funds, the wrong assessment of managers, and the formulation of incorrect economic decisions and policies.

## CURRENT AUDITING PRACTICES OF SOES

### Establishing State Auditing Offices

Due to the narrow focus of the financial examination by the Ministry/Department, these management problems could not be discovered or resolved. By and large, audits by the Ministry/Department of Finance tended to be concerned with uncovering taxes, profits and charges that should be submitted to the government but still retained in the enterprise (State Council of China, 1986). In addition, there was a lack of independence. The Ministry/Department of Finance might have financed the SOE and have been involved directly or indirectly in making business decisions. They have to consider their interest when performing the financial examination. Consequently, the examination might be biased as the examiner has a strong and direct interest in the revenue outcome of the audit. There are anecdotal stories that some departments of finance would not correct accounts as long as they achieve the budgeted revenue collections for the current year, leaving the (uncorrected) detected errors as a hedge for attaining future years' collection targets.

In responding to these changes resulting from SOE restructuring and particularly in recognizing the need for a more independent auditing organization, the Chinese Constitution was amended to create state auditing offices (Audit Administration or Audit office), and to charge it with this responsibility. Article 91 of the Constitution (1982) states that: "The State Council establishes an auditing body to supervise through auditing the revenue and expenditure of all departments under the State Council and of the local governments at different levels, and those of state financial and monetary organizations and of state enterprises and undertakings." Article 91 also states that: "Under the direction of the Premier of the State Council, the auditing body *independently* exercises its power to supervise through auditing in accordance with the law, subject to no interference by any other administrative organ or any public organization or individual" (*emphasis added*). In 1983, the Audit Administration under the State Council was officially set up according to Article 91 of the Constitution. This signaled the beginning of modern state auditing in China. After that local state audit offices were also established. On 30 November 1988, the State Council issued the "Auditing Provisions of the People's Republic of China," which was effective on and from 1 January 1989. As described in Lau and Yang (1990), the 1988 Audit Provisions strengthened the line supervision of the auditing organization structure and eliminated the dual leadership problem encountered by the state auditing offices. In addition, the state auditing offices were permitted to establish an internal audit department or standing agency to perform audits on their behalf.

On 31 August 1994, replacing the "Auditing Provision," the Standing Committee of the People's Congress adopted the Auditing Law of the People's Republic of China, which was effective on 1 January 1995. The Auditing Law reinforces the roles and responsibilities of the state audit office. It prescribes the scope and procedure of auditing of SOEs. More specifically, Auditing Law (Articles 2 and 20) states that the state audit office should

audit financial revenue and expenditure, assets, liabilities, profits and losses of SOEs. In addition, due to the vast number of SOEs, the Law (Article 21) focuses on the audit of those SOEs that are considered essential to the national economy (e.g., energy, transportation, communication, airlines, steel, electricity, defense, hi-tech, and food) and those enterprises that received large financial subsidies from the government.

Basically, auditing by the state audit office involves the evaluation of the fiscal plans implemented, reviews of the revenue and expenditures, and assurance of compliance with the state's financial and economic guidelines, regulations, rules and disciplines (Huang, 1987). Under the Auditing Law of the People's Republic of China, the main objectives of an SOE audit can be summarized as:

1. Assessing whether the financial revenue and expenditure are true and correct;
2. Assessing whether the transactions and business activities that give rise to the revenue and expenditure are conducted in accordance with financial and economic laws and regulations; and
3. Assessing whether public funds are used effectively and efficiently.

In practice, while the last objective is explicitly stated in the Auditing Law (Article 2), its implementation is hampered by the lack of specific criteria for measuring effectiveness and efficiency. It is also difficult for the state audit office as a government agent to make judgment about SOE business decisions and activities in terms of effectiveness and efficiency.

The approach for the auditing of SOEs involves the following (Lau and Yang, 1990):

1. Auditing agencies submit their annual plan and work report to their respective controlling governmental units;
2. SOEs submit their financial revenue and expenditure plan, credit plan from banks, budget, final accounts and statements etc., to their respective auditing agencies;
3. Audit agencies submit the audit reports including SOEs' comments to their respective controlling governmental units;
4. When disagreeing with the audit reports, SOEs could appeal and request to be reaudited;
5. When disagreeing with the reauditing conclusions and decisions, SOEs could appeal to a court.

A real case is provided in Appendix A as an example of a typical SOE audit report by the state audit office. The names of the office and the SOE have been disguised. This report illustrates the main purpose, scope and conclusion of an audit conducted by a provincial state audit office. It also shows the following required components of an audit report:

1. Details of audit findings;
2. Whether the auditee has admitted the problems (if not, then the details of disagreement should be indicated);
3. The auditor's opinion as to how to treat the case, indicating what are the responsibilities of the people involved, and suggestions for improvement;

4. The organizations that will receive the audit report. The main receiving organization is generally the one which had authorized the audit. (In this case, it was the Office of the People's Government of the Province.) The audit report also may be copied to other governmental bodies, such as the higher authority in charge of the auditee. (In this case, it was the Bureau of Industry of the Province, the Bureau of Supervision of the Province, and the Bureau of Finance of the Province.)

Under the Auditing Law, the state audit office does not have the authority to take direct actions against the auditee. Rather, its audit decisions are viewed as recommended treatments for the case (Auditing Law, Articles 34 and 35). Generally, penalties for wrong-doings are of three major types: (1) Economic penalties, such as resubmission of profit, confiscation of property, fines, and termination of funds and/or loans to the auditee; (2) Administrative penalties, such as correction of accounts, sealing of books and accounts, public reprimand, and removal from office for responsible persons; and (3) Criminal punishment (Auditing Law, Article 47). This is also presented in the case (see Appendix A for details of the case).

While the audit decisions must be implemented by relevant authorities, a report of the implementation has to be submitted to the Audit Office. On receiving the report, the Audit Office may conduct a follow-up audit to see whether the recommended actions have been enforced (Guang, 1993; Wei, 1994).

## Assessment of State Audit Offices

In contrast to the Ministry/Department of Finance, since the state audit office is funded separately from SOE, it has no direct economic interest in the SOE it audits or the outcome of the audit. The state audit office appears to be, and is in fact, more independent than the Ministry/Department of Finance. As state audits are conducted under the Constitution and a separate Auditing Law, they have a much stronger legal backing than financial examinations conducted by the Ministry/Department of Finance. Furthermore, state audit offices also differ from the Ministry/Department of Finance as they are not involved in the formulation of financial and economic policies.

Since the establishment of state audit offices, many fraud and irregularities in SOEs have been discovered. Wei (1994), in reporting the 10-year performance of the state audit office, states that the state audit office discovered more than 25.8 billion yuan of funds not submitted to the state, 28.7 billion yuan inappropriately used funds, 1615 corrupt cases and 10,561 corrupt officials.

However, due to limited resources and the lack of qualified auditing personnel, the state audit offices were only able to audit a small number of SOEs. Since the closure of private and public accounting firms in 1958, all auditors have been government employees. There were more than 3000 governmental auditing agencies and nearly 40,000 auditing personnel in the early 1980s. As there were about 500,000 SOEs and approximately 2 million organizations subjecting to state audit offices' audits, only about 4% of these organizations were being audited. In other words, some SOEs were not subjected to appropriate supervision through the use of annual financial audit.

Wei (1994) also indicated that the main concern of the state audit office was fraud and irregularities rather than verification of financial statements. Furthermore, the priority of state audit offices was the auditing of expenditure and income of the government departments rather than audit of SOEs as a whole. This priority is consistent with Articles 2 and 20 of the Auditing Law which specify clearly the responsibilities of the state audit office.

On the other hand, as the SOE is not a company that is governed by the Company Law, it does not have to provide audited financial statements under the provision of the Company Law. Only a relatively small number of SOEs have been transformed into listed companies which were subject to the listing rules which require audited financial statements. Consequently, for most SOEs, no formal audit of financial statements is required and no independent opinion is provided as to whether these financial statements are true and fair. Although there might be some tax audit from the Department of Tax, this is only for tax purposes, and this audit is not intended to verify financial statements. Given the relaxed requirement for the state audit office's audit and a strong incentive for the managers to manage earnings,[5] the financial statement figures are very likely to be fraudulently manipulated[6] and unreliable. Economic policy and decision based on these unaudited financial statements may again have the same problems, which were encountered when the Ministry/Department of Finance was performing the financial examination as discussed in the previous section. In other words, the establishment of the state audit offices did not overcome the SOEs' managerial problems.

As the state audit offices do not have sufficient resources to perform audit for all SOEs, audit becomes highly selective. For those that are not selected, the audit office has no responsibility for any failure of business and other problems such as misleading or fraudulent financial statements. As a result, a state audit office may prefer to choose low audit-risk SOEs and avoid high-risk SOEs.

## FUTURE DEVELOPMENTS

### Permitting CPAs to Audit SOEs

The above problems cannot be resolved simply by increasing the budget of the state audit offices. In addition to the limited resources of the state audit offices, there is a fundamental conflict between SOEs after restructuring as a commercial organization and the state audit office as a government agent. Given the position of the state audit offices, they are unlikely to provide unbiased views and to perform appropriate verification of financial statements and business activities.

With further economic and enterprise reforms, the general structure of SOEs would lead to:

1. further separation of management and control;
2. further diversification of ownership;
3. more transferable ownership;
4. increased degree of commercialization of the business operations.

Diversification of the ownership of SOEs would be inevitable. The Chinese government encourages other investors to purchase SOEs' stocks. Some SOEs have already transferred share ownership to individual, institutional and foreign investors. As a result of diversified ownership, there will be other users of financial statements, such as non-governmental investors, commercial banks that are also becoming independent from the government direct control, employees and unions. Before restructuring, jobs were guaranteed in SOEs. Salaries and wages were fixed and not adjusted according to SOE performance. Consequently, employees were rarely interested in financial position of SOEs. However, this is no longer the case. Employees and trade union can invest in SOEs and are becoming interested in the financial statements issued by SOEs.[7]

However, to develop the users' trust in the SOE's financial statements, independent audits have to be performed on these financial statements. The independent audit professions, which can provide unbiased views on the financial reports have to be established. The state audit office cannot perform an independent audit due to its relationship with the state or central government. It can only represent the interest of the government and cannot represent interests of other investors and interest groups in the SOE. Therefore, audit of SOEs by the state audit office would reduce the credibility of the audit reports perceived by non-government users.

Further market reform would cause the operation of SOEs to be completely commercialized, i.e., the business activities are not subject or linked to any political consideration and state social and economic policies. Consequently, any form of governmental interference with business activities, including state auditing, would be viewed as inappropriate. There are some well-publicized cases that audits by the state audit office were highly politically motivated. The state audit office might be under political pressure when performing the audit and its independence might be compromised.[8]

It is argued that SOEs should be audited by a non-government third party. The existing Chinese certified public accountants (CPAs) can take over the audit for all SOEs. The Chinese CPA system was revived due to the economic reform (Huang, 1987). The roles and responsibilities of CPAs and CPA firms are defined in the 1993 Law of Certified Public Accountants. CPA firms were employed for doing assets valuation and annual audit for Sino–foreign joint ventures, companies and occasionally some SOEs assigned by state audit offices. The laws, however, are silent on requiring all SOEs, especially those not-corporatized, to be audited by CPA firms. If the CPAs' audits can be required and extended to all SOEs, the following benefits may be realized.

1. The audit reports issued by CPAs may have more creditability, as the CPAs are viewed to be more independent and are subject to less political pressure than a state audit office.
2. A CPA firm is more likely to add audit value to the business of the firm as the audit would be conducted from a pure business point of view.
3. It is unlikely that the budget of state auditing services would be increased significantly and the limited resources of the state audit office may be used more efficiently and effectively by focusing solely on governmental departments' expenditures and income.

4. All SOEs would be subject to audit, either by CPAs or Certified Public Auditors (some Chinese CPAs are called "certified public auditors").
5. The substantial SOEs' audits could strengthen the development of the auditing profession in China.

However, there are a number of problems that should be resolved regarding the audit of SOEs by CPA firms. First, CPA firms should be de-affiliated from any governmental units. As most CPA firms are historically affiliated with governmental or educational institutions,[9] there is a concern of whether the CPAs are really independent when performing the SOEs' audits (and other audits as well). The affiliated relationship may affect the CPAs' judgment and decision and create a perception of lack of independence. The de-affiliation is required and it is expected that all de-affiliation should be completed in the near future. However, as the process has been very slow,[10] it is suggested that only de-affiliated CPA firms should be allowed to do audit for SOEs. Second, CPA firms should develop auditing standards about *regulation compliance audit.*[11] This is because the traditional role of the CPA audit is to verify the financial statements rather than discover fraud and irregularities which is an important part of the audit of SOEs. The current professional auditing standards appear inadequate to guide the latter audit.[12] Third, audit of SOEs is a potentially huge market and is a real challenge to CPA firms. More qualified and well-educated professional accountants are needed. This is crucial to strengthen and to improve credibility of SOEs' audit. The target may be achieved by professional and educational efforts, government support and other means, including the cooperation of the international accounting community such as the Big Five accounting firms and the International Federation of Accountants.

In addition, the following revisions of the 1994 Auditing Law and the 1993 CPA Law and the professional auditing standards regarding SOE audit are required.

1. Revision of Article 91 of the Constitution and Articles 2 and 20 of the Auditing Law. Such a revision would indicate, to the effect, that the financial statements of commercial SOEs (i.e., those that have a separate legal entity status) should be audited by a non-government third party (i.e., CPA firm).
2. Revision of the provision in the Auditing Law about economic and efficient auditing. Economic and efficient auditing, if it is done correctly, can be very beneficial to the audited organizations. However, there is a lack of clearly defined criteria to perform and evaluate this type of audit. The law should be revised to provide guidance and criteria for performing the economic and efficient auditing.
3. Revision of the CPA Law. Under the 1993 CPA Law, a CPA firm has no responsibility to undertake an audit of SOEs. A provision should be incorporated regarding audit of SOEs by CPA firms. In addition, it should specify the objective and basic procedures of SOEs' audit. Furthermore, the principal role and obligations of a CPA firm for such an audit need to be stated.
4. Revision of auditing standards. Current auditing standards should also be revised to guide the practice of SOE auditing. The main changes would be those regulations relating to compliance test procedures (beyond financial statements).

## SUMMARY

This paper has provided an overview of the historical development and current practices in the audit of China's SOEs, and offered some observations on current developments and future challenges. The relationship between the SOE after restructuring and the state audit office is also examined. It is obvious that developing a uniform and high level of audit assurance for China's vast number of SOEs in particular, and its economic institutions in general, will be a most challenging undertaking. Among the issues that need attention are the development of a sufficient number of trained auditors and accountants, uniform audit standards, and an institutional framework to support the auditors' exercise of independent judgment.

## LIST OF RELEVANT CHINESE ECONOMIC AND FINANCIAL LAWS AND REGULATIONS

Audit Administration. 1986, Notice of the Audit Administration on Audit of Economic Responsibility of Head of Unit on Termination of Office.

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State Council of China, 1986, Document No. 92. Provisions on General Examination of Tax, Finance and Prices of Commodities.

State Council of China. 1987, Regulations for the Implementation of the Law of the People's Republic of China on China–Foreign Equity Joint Ventures.

## APPENDIX A. CASE ILLUSTRATION

### A.1. Audit Report Regarding State-Owned Factory Da Zhou

State Audit Bureau, *** Province
Reference No. ******* Date:*******

This Bureau has conducted an audit for annual accounts of 1995 for state-owned Factory Da Zhou, in order to implement the resolution of Audit Administration in 1996 regarding strengthening auditing, facilitating reform and maintaining economic order and continuing financial and economic regulation compliance audit. The following is a summary of the main findings.

1. Management had intentionally increased the cost of products and reduced current year profit by 180,000 yuan.

Evidence: Cost of product C2 for the month of December should be calculated using weighted average method. But the Head of the Factory and the Financial Controller instructed the staff to use standard unit cost, which increased the cost of goods sold by 180,000 yuan and reduced the profit by 180,000 yuan.

2. Management had intentionally delayed recognition of sales revenue by 450,000 yuan; as a result, the current year profit was reduced by 120,000 yuan.

Evidence: During the audit, we found a record indicating that 85 units of finished goods (Product G2) were shipped out on 27 December 1995, but there was no sales record. The sales person and the accountant said that the sale was recorded on 6 January 1996 under the instruction of the Head of the Factory.

The Financial Controller and the Head of Sales and Purchase Department were also involved in the manipulation of accounts. Sale of Product B2 was recognized on 17 January 1996 when payment was received rather than on 25 December 1995 when the goods were shipped.

3. Management had deliberately treated the overhaul expenditure (which should be capitalized) as administration expense and then had written it off as a current expense, so that current profit was reduced by 250,000 yuan. This was also done under the instruction of the Head of the Factory and the Financial Controller.

4. Management had deliberately concealed its investment of 10.2 million yuan in an associated factory in accounts receivable (i.e., not recorded in an investment account); and the profit on the investment of 1.45 million yuan for this year was recorded in accounts payable.

The Head of the Factory had manipulated its accounts. This was a breach of Accounting Law of the People's Republic of China, of Enterprise General Financial Principles, of Accounting Standards for Enterprises and Accounting System for Industrial (manufacturing) Enterprises. The sales person, the accountant, and the Financial Controller also had breached the relevant provisions in the Accounting Law, as they had failed to resist the pressure from the Head, and failed to report the manipulations to the higher authority. However, all of them have confessed and submitted written reports about the wrong doings. They have promised never to do it again.

Enclosed, please find a copy of the audit decision and of the audit notice.

Cc: The Office of the People's Government of the Province; The Bureau of Supervision of the Province; The Bureau of Finance of the Province; The Bureau of Industry of the Province

## A.2. Audit Decision Regarding State-Owned Factory Da Zhou

To: The Factory Da Zhou

During the audit, it has been found that the accounts of Factory Da Zhou were seriously distorted (the details are summarized in the Audit Report). These activities were in breach of financial and economic regulations and rules, and you have admitted all these wrong doings. According to the Accounting Law of the People's Republic of China, Enterprise General Financial Principles, and Accounting Standards for Enterprises and Accounting System for Industrial (manufacturing) Enterprises, and other relevant rules, we have made the following decisions:

1. The Factory had reduced current profit by 2 million yuan in the accounts. The Factory must pay an additional income tax of 0.91 million yuan to the tax office within * days and pay a fine of 107,000 yuan as well.
2. The Factory must transfer 93,000 yuan profit to the statutory surplus reserve (this amount is determined by the current profit);
3. The Factory must pay an additional dividend of 270,000 yuan
4. The Factory must pay a special fund charge of 180,000 yuan.
5. The Factory must also correct its accounts for this year and next year within 28 days.
6. The Head and the Financial Controller of the Factory had deliberately breached the financial and economic regulations and rules. We notice that they have made the confession and promised to correct these problems. We recommend that the higher authority take appropriate actions against the responsible persons in order to enforce the financial and economic regulations and rules and to maintain economic order.

Enclosed: a copy of the audit report.

Cc: The Office of the People's Government of the Province; The Bureau of Supervision of the Province; The Bureau of Finance of the Province; The Bureau of Industry of the Province

Provincial State Audit Office (seal)

Date: ***

## NOTES

1. For example, it has been reported that from 1986 to 1996, state funds of 337 billion yuan were embezzled to the supposed overseas branches of SOEs, which actually were controlled by individuals (Dong Hua Newspaper, 18 December 1997), and the amount of embezzled state funds that had been transferred overseas in recent years was estimated at US$10 billion a year (The Chinese Herald, 24 June 1997).
2. That SOE cash flows were part of the overall cash flow system of the state was a feature of the centralized economic structure before reform. Under that system, the business finance of the SOE was treated as an integrated part of public finance. This also has a fundamental effect on financial reporting and accounting system in China prior to reform (see Chen and Yu, 1994 for a discussion about the relation between the centralized finance structure and accounting system).
3. Tang et al. (1996) describe the rewarding system under CRS and there is a clear and direct association between firm performance and personal financial benefits. A contractor who fails to meet the targets specified in the contract is liable for financial penalties. If the results surpass

the agreed-upon targets, the excess profit is divided between the state agency and the contractor.

4. Relying on accounting measurement necessitates special auditing practices for SOEs, i.e., audit of contractual responsibility. The purpose of the audit is to see whether the operating targets contracted had been actually achieved. The audit includes an overview of financial and non-financial information. Such an auditing is often conducted by the state audit office, but may be performed by an internal audit office or subcontracted to a CPA firm. See 'Regulations of the Audit Administration on Audit of Contractual Responsibility for Industrial State-Owned Enterprises' and 'Notice of the Audit Administration on Audit of Economic Responsibility of Head of Unit on Termination of Office' for detailed procedures of such auditing. And also, Li (1995) provides an example of such an auditing.
5. The current accounting system provides sufficient flexibility to allow earnings management. One example is making no provision for bad debts, as Chinese accounting standards only provide for a maximum limit on such provisions, but do not require such provisions to be made. Depreciation charges, expenditures for overhaul and maintenance, staff training and R&D activities also may be minimized to inflate short-term profits (Chen et al., 1997).
6. See the case in Appendix A for examples of negligent or fraudulent manipulation of accounting and financial information.
7. Use of financial statements by diversified users is certainly taken into account by accounting reform. For example, Chen and Yu (1994) argued that as fund sources for SOEs are diversified, financial statements should reflect the equity interest of all investors besides the state, so that the traditional format of balance sheet, which only reflects fund flow of the state, should be abandoned and the international format of balance sheet should be adopted (Chen and Yu, 1994). Unfortunately, the impact of diversification of ownership on auditing has not been seriously considered yet.
8. One example was the audit of the *Disabled Foundation*. The audit was triggered due to the widely circulated assertion that the *Disabled Foundation* might be engaged in improper or even illegal commercial activities. This was a politically sensitive case because it involved high-ranking officials in the government. Another example was the recent case of the audit of a company that illegally raised huge amounts of fund. The investigation proved extremely difficult as high-ranking officials in the government and the party were involved (one member of the Political Bureau, Chen Xi Tong who was involved has been eventually convicted and sent to jail).
9. For example, the first accounting firm in Shanghai was set up by the Finance Department of Shanghai and was affiliated with the Department until today.
10. For example, by the end of 1996, a total of about 6700 accounting firms had been established in China; only a handful of them were independent, private partnership structures (Dai et al., 1998).
11. Many differences are found between financial statement auditing and the *regulation compliance audit*. For example, evidence from sampling is generally not accepted for fraud auditing in China.
12. Chinese professional auditing standards, which are based on International Auditing Standards, focus on audit of financial statements rather than discovering of fraud and irregularities. See the new set of auditing standard issued by The Chinese Institute of CPA (CICPA), 1997.

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# A Cross-National Test of Determinants of Inflation Accounting Practices

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**Key Words:** Cross-national; Culture; Inflation accounting; Social change model

***Abstract:*** *This paper develops a model to identify characteristics that may affect inflation accounting practice among countries. Parametric and nonparametric tests are conducted to determine the effect of inflation rate, national culture, legal system, economic system, accounting system, and other accounting policies on inflation accounting practice. Countries that use price level adjustment have higher inflation than countries that use historical cost or historical cost with some revaluation. The results indicate that national culture, accounting system, economic system, and financial statement disclosure are also important factors in explaining the cost basis used by businesses operating in various countries.*

The globalization of financial markets has created a large number of investors who trade in foreign securities and companies that issue securities on foreign exchanges. Differences in accounting standards among countries make it difficult to efficiently issue or analyze foreign securities (Choi and Levich, 1991; Wolk and Heaston, 1992; Bunting, 1994). A need for international harmonization of accounting standards has developed as a result.

Others have argued that harmonization may be difficult to achieve (Schweikart, 1985). Socioeconomic and cultural differences as well as differences in capital structure and economic development create obstacles (Rivera, 1989). Given these difficulties, perhaps the best strategy is to standardize disclosure to facilitate investor comparison (Grove and Bazley, 1993).

Whichever approach is taken to resolve international accounting issues, there is a need to understand the causes of accounting differences among countries. Sy Cip (1981) argues that such an understanding is essential to gaining acceptance of international standards and suggests that different accounting principles may be needed in different environments. Wolk and Heaston (1992) also call for research on these issues. Schweikart (1985) stresses

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the need for a theory to guide international accounting research. He proposes the use of contingency theory. Harrison and McKinnon (1986) present a model of social change that they apply to the study of accounting. Other types of theories or models may be useful as well. Regardless of the theoretical direction chosen, research is needed that will explain what factors influence accounting policy choice at the country level.

One of the fundamental issues in accounting measurement is changing price levels (Bindon and Gernon, 1987), which has been the subject of two International Accounting Standards. The importance and usefulness of inflation-adjusted financial statements has been the topic of many accounting studies. These studies have focused on what method of adjustment to use and whether these adjustments provide information to users. The literature has not addressed the characteristics that explain differences in the choice of inflation accounting methods among countries. Numerous countries ignore its effects and use historical cost as the reporting method. Other countries use some form of price level accounting. Still other countries use historical cost with revaluation of certain accounts. Since these different approaches exist, differences between countries must exist that explain the use of different methods.

The purpose of this paper is to investigate differences among countries that may explain differences in inflation accounting. A model of inflation accounting practice is developed to identify characteristics that may affect the use of inflation accounting. Proxies for these characteristics are identified and statistical tests are used to determine if countries that practice different inflation accounting standards differ in these characteristics. The results of this analysis will provide information about characteristics that influence accounting practice at the national rather than firm-specific level. VanDerTas (1992) argues that it is important to study harmonization of accounting practice rather than accounting principles as enforcement of principles may differ across countries and it is actual practice that is observed and would indicate how the cost basis decision interacts with national culture and other national systems.

The results indicate that countries that use price-level adjustment (PL) have higher inflation and power distance, lower individualism, and are more likely to have emerging economies than countries that use historical cost (HC) or historical cost with some revaluation (SR). HC and SR countries have smaller differences in inflation, but have several cultural, accounting system, economic system and disclosure differences. These results indicate that, besides inflation, culture, accounting system, economic system, and financial statement disclosure differences between countries explain the use of different cost bases.

The next section discusses the background of inflation accounting. The following sections describe theory development and data. Results are analyzed and the paper concludes with a summary and conclusion.

## BACKGROUND

The first reference in the literature concerning the need for adjusting accounting data for inflation was in 1911 by Fisher (Clarke and Dean, 1989). Fisher, however, did not develop an accounting model. He just pointed out that inflation causes accounting to report paper profits. The first inflation accounting models were developed by Germans during the

inflation related to World War I: Mahlberg developed a price-level adjustment model in 1921; Schmidt developed a current value model in 1921; and Schmalenbach developed a price-level adjustment model in 1922 (Graves, 1989). High inflation started in Germany in 1914 reaching hyperinflationary levels in 1922–1923. Mahlberg's price level adjustment model was used by German companies between 1922 and 1925 (Clarke and Dean, 1989). Thus, high levels of inflation spawned the development of inflation accounting models and hyperinflation brought those models into use.

Sweeney used these German models to develop an inflation accounting model, which he introduced in the United States in 1927. He continued developing his stabilized accounting model into the 1930s. The idea, however, was not well received because the United States was not experiencing high inflation (Clarke and Dean, 1989).

Discussions concerning inflation accounting and its use are most prevalent in countries during times of high inflation. When inflation is low, little discussion tends to take place. Getting support for required use is also difficult in times of low inflation. This can be documented by considering the timing of adoption of inflation accounting by various countries. France used indexation to account for post World War II inflation between 1945 and 1962 (Schoenfeld, 1979). Brazil, a country plagued with high inflation, started a system that relies on indexation in 1951 (Schoenfeld, 1979). The energy crisis of the 1970s triggered high inflation in many countries. As a result, most industrialized countries began developing standards to account for the effects of inflation. The United Kingdom completed a current purchasing power exposure draft in 1973 and a statement in 1974 (Allen, 1989). Also in 1974, the United States developed a current purchasing power and current-cost/constant-dollar-based exposure draft, which resulted in a standard in 1979 (Hanna, 1988). In 1975, the German Institute of Auditors recommended the use of some current cost adjustments to income (Graves, 1991). After government intervention, the United Kingdom issued a second exposure draft on inflation accounting calling for use of current cost accounting in 1976. This exposure draft resulted in a statement in 1980 (Singleton-Green, 1990). Canada issued a statement for supplementary and voluntary disclosure on a current cost/constant dollar basis in 1982 (Hanna, 1988).

In general, these standards all came out during periods of historically high inflation. Even accountants realized the need for at least supplemental disclosure of the effect of inflation on reported income and assets. However, as the worldwide economy recovered, the popularity of and support for inflation accounting declined. With lower inflation rates, most of these countries made disclosures voluntary or suspended the statements altogether by the mid-1980s (Hanna, 1988).

Thus, an examination of the historical development and use of inflation accounting shows that high levels of inflation have precipitated the use of some form of inflation accounting adjustments. However, it is not clear from this examination what other factors influence the adoption of inflation accounting.

## THEORY DEVELOPMENT

Harrison and McKinnon (1986) view accounting as a social system. They develop a modified exogenous framework of change analysis. This framework models social change within the context of culture, intrusive events, intra-systems activity and trans-system

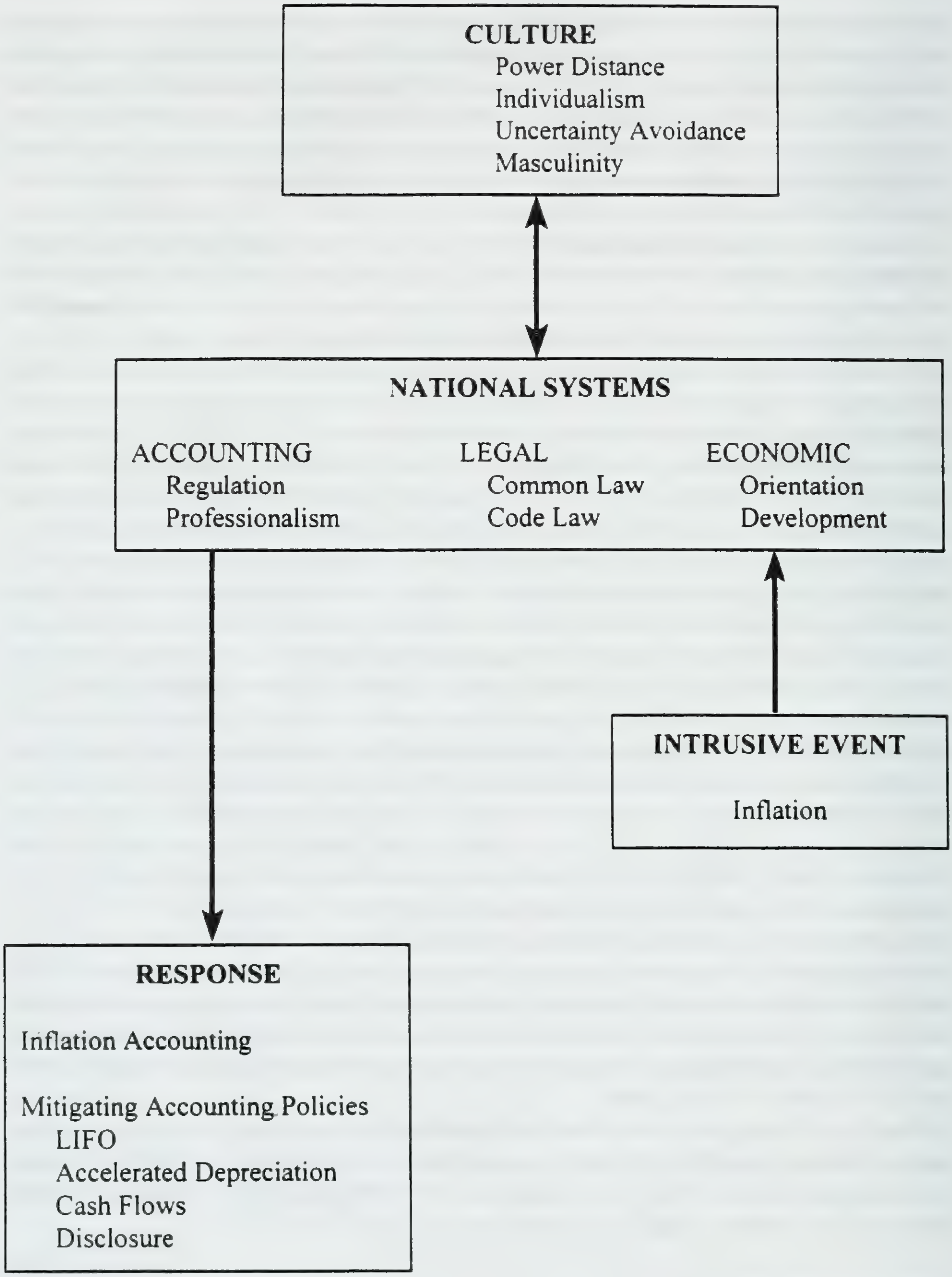


**Figure 1.** Inflation Accounting Practice Model

activity. Systems within a country share a cultural environment. Intrusive events create a need for change in a social system. Intra-system activity includes interactions among elements of a system. Trans-system activity includes interactions among different systems. These interactions and intrusive events generate systems change. Figure 1 is an adaptation of the Harrison and McKinnon model to examine inflation-accounting practice. This model is used in this study to examine the factors that influence the choice of cost bases predominantly used within a country.

Inflation may be considered an intrusive event in accounting practice. Higher levels of inflation create greater distortions in historical cost financial reports. Connon (1987) found that users consider the level of inflation to be the most significant factor in determining the importance of inflation accounting.

The inflation-accounting practice model (Figure 1) considers how the accounting system may respond to inflation in the context of other legal and economic social systems. The accounting system may respond to high inflation by adopting a form of inflation accounting. In addition, other accounting policies, such as the use of LIFO or accelerated depreciation, may provide information that is useful in an inflationary environment.

### Inflation Rate

As the inflation rate increases, the disparity between historical cost and current cost tends to increase and historical cost becomes less informative. The literature has not empirically addressed the issue of what inflation rate leads to a need to adjust historical cost reporting for it to be useful. It has been universally accepted that hyperinflation creates a need for adjustment (Accountancy, 1993). International Accounting Standard No. 29 has defined hyperinflation to involve a 3-year cumulative rate of inflation of 100% or more. The literature, however, includes references to a need for adjustment at lower levels of inflation as well. However, these comments are not always consistent. Schoenfeld (1979) mentions that countries with an inflation rate of 5% or higher are involved in discussions about and have professional support for inflation accounting. In contrast, Connon (1987) reports the results of a survey of users and preparers of financial statements that indicates that only 49% of preparers and 75% of users are concerned about the effects of inflation at a 10% level. These two references together indicate that inflation rates as high as 5% to 10% may render historical cost less informative.

The model in Figure 1 indicates that inflation can be viewed as an intrusive event. Once a nation experiences high inflation, the accounting system (along with other systems) may change in response to the new situation. The response that occurs, however, will differ from country to country based on how the increased inflation interacts with each country's unique set of cultural and national systems. However, the higher the inflation rate, the more likely it is that some form of inflation accounting will be used. Thus, inflation accounting is expected to be adopted in high inflation environments.

**$H_1$:** Countries using inflation accounting have higher levels of inflation than countries using historical cost.

## National Culture

Culture affects how people perceive situations and organize institutions. The intrusive event of inflation will be viewed by individuals of each country within the cultural context of that nation. Therefore, culture may influence a nation's choice of inflation-accounting standards. Hofstede (1991) identifies five cultural dimensions: power distance, individualism, long-term orientation, uncertainty avoidance, and masculinity. This study relies on the Hofstede cultural dimensions to measure national culture. Long-term orientation is not used, however, because it is negatively correlated with individualism (Yeh and Lawrence, 1995) and there are insufficient observations to conduct complete statistical tests.

### *Power Distance*

Power distance represents the extent to which people tolerate unequal distribution of power within society. A high power distance index score means that people have a high tolerance for power inequality. Gray (1988) predicts that power distance may be related to disclosure. Countries with high power distance scores may restrict information, while countries with low power distance scores may provide more disclosure. If current cost information provides more disclosure than historical cost, then countries with low power distance scores may be more likely to adopt inflation accounting and countries with high power distance scores may be more likely to adopt historical cost.

> **$H_2$:** Countries using inflation accounting have lower power distance measures than countries using historical cost.

### *Individualism*

Individualism refers to the extent to which people are not interdependent as opposed to collectivism, in which people are organized into strong groups. Gray (1988) predicts that societies with less individualism have more conservative financial reporting and less disclosure. Therefore, countries with less individualism may be more likely to adopt historical cost.

> **$H_3$:** Countries using inflation accounting have higher individualism than countries using historical cost.

### *Uncertainty Avoidance*

Uncertainty avoidance represents the extent to which people feel threatened by unknown situations. Countries with low uncertainty avoidance tend to be more creative. Gray (1988) predicts that countries with high uncertainty avoidance have more conservative financial reporting and less disclosure.

The effect of uncertainty avoidance on inflation accounting may vary with the inflation rate. With low inflation, historical cost is more objective than current cost and the

distortion caused by inflation is relatively small. In this case, countries with high uncertainty avoidance may be more likely to adopt historical cost.

> **$H_4$:** In the case of low inflation, countries using inflation accounting have lower uncertainty avoidance than countries using historical cost.

As inflation increases, the distortion effects increase and historical cost becomes less relevant. In this case, countries with high uncertainty avoidance may prefer to adopt inflation accounting.

> **$H_5$:** In the case of high inflation, countries using inflation accounting have higher uncertainty avoidance than countries using historical cost.

### *Masculinity*

Masculine societies stress achievement, heroism, assertiveness, and material success. Feminine societies stress relationships, modesty, caring for the weak, and quality of life. Gray (1988) predicts that masculine societies are less conservative and have more disclosure. The emphasis on achievement and material success may also increase the need to control for inflation when measuring financial performance. Therefore, countries with more masculinity may be more likely to adopt inflation accounting.

> **$H_6$:** Countries using inflation accounting are more masculine than countries using historical cost.

## Accounting System

The accounting system within a country refers not only to a nation's accounting standards but the role that accounting plays in the society. It is this societal role that underlies all of the standards and influences how the system will react to intrusive events such as inflation. The classical accounting model is based on historical cost or nominal dollar capital maintenance. However, as inflation is introduced, elements within the accounting system may interact with one another and with other systems in the country to change from nominal dollar to some other capital maintenance theory. What action occurs within the accounting system as a response to inflation will depend on the elements within the accounting system as well as how those elements interact with other systems (such as legal and economic) and the country's cultural views. The response of the accounting system does not occur in a vacuum, but is viewed as a response to all the inputs represented in Figure 1. Within the accounting system, two elements that would seem to be relevant to how likely the accounting system will change in response to any event are the regulatory nature of accounting and the role played by the profession.

### *Accounting Regulation*

The extent of accounting regulation may influence the financial reporting system. Highly regulated accounting systems may be more responsive to intrusive events because of the oversight by the regulatory body. Therefore, the effect of accounting regulation on inflation accounting may vary with the inflation rate. In particular, countries with high inflation may be more likely to practice inflation accounting if accounting is highly regulated.

**$H_7$:** In the case of high inflation, countries using inflation accounting have greater accounting regulation than countries using historical cost.

### *Accounting Professionalism*

The extent of professional development in accounting may influence the financial reporting system. Salter and Niswander (1995) use auditor judgment expressed in opinions as a proxy for professional development. Because of the tradition of conservatism, a more developed profession may have a vested interest in promoting and defending the traditional accounting model against challengers. The traditional model uses historical cost to measure assets. Countries with less developed professions do not have the long history of using historical cost and may be more open to using other models.

**$H_8$:** Countries using inflation accounting have a lesser extent of professional development in accounting than countries using historical cost.

## Legal System

A country's legal system may also interact with its accounting system to influence the financial reporting system. Salter and Doupnik (1992) classify countries into the common law family and the Romano-Germanic family and demonstrate that legal system is related to accounting practices. The common-law family is characterized by solutions to specific cases. The Romano-Germanic family is characterized by codified laws. Common law, with its reliance on similar cases from the past, may create an environment in which it is easier for accountants to maintain tradition. Countries with codified laws, with less reliance on traditional cases, may be more likely to develop accounting rules that modify the basic accounting model. Since inflation accounting changes measurement away from historical cost, perhaps it is more likely to develop in the Romano-Germanic or code law family of countries.

**$H_9$:** Countries using inflation accounting are more likely to have codified laws than countries using historical cost.

## Economic System

Accounting measures economic outcomes of transactions and events. Thus, the accounting system and economic system of a country are interrelated. Inflation will have an effect on the economic system of a country. How the economic system reacts depends upon its elements as well as other national systems and culture. A common response to extremely high inflation is the devaluation of currency or the introduction of a new currency unit (Cheney, 1990; Wall Street Journal, 1998). These actions will have a direct effect on accounting as some monetary unit of measure must be used in the accounting system. However, less direct interactions between the economic and accounting systems are also likely to occur because of their interrelatedness. Two of these influences would be the economic orientation of a country and the level of economic development.

### *Economic Orientation*

Nobes (1983) and Berry (1987) classify countries as macro-uniform or micro-based in economic orientation. Nobes (1987) describes accounting in the macroeconomic framework as being subordinated to national economic policies. In uniform systems, governments use accounting to administer business policies. Microeconomic systems have market-oriented economies where accounting is focused on businesses, independent of government.

Nobes (1983) differentiates countries on the basis of types of users, the extent to which law or standards prescribe detail and exclude judgment, the importance of tax rules in measurement, the degree of conservatism, the use of historical cost and replacement cost, the use of consolidations, the ability to use provisions to smooth income, and uniformity among companies. He finds that micro-based systems are more likely to use replacement cost.

Berry (1987) extends the classification to include countries that use price-level accounting. Several of these countries are in the South American subset of the macro-uniform class. In general, there is no apparent relationship between economic orientation and the use of price-level accounting.

**$H_{10}$:** Countries using historical cost with some revaluation are more likely to have a microeconomic orientation than countries using historical cost.

### *Economic Development*

The level of economic development and the financial reporting system are interrelated. The need for financial reporting increases as an economy becomes more developed. In the case of inflation accounting, developed economies may have an established tradition of using historical cost. Emerging economies may have grown during periods of high inflation (after the World Wars) that may have led to the use of inflation accounting as the basic model. As a result, countries with emerging economies may be more likely to adopt inflation accounting.

**$H_{11}$:** Countries using inflation accounting are more likely to have emerging economies than countries using historical cost.

### Mitigating Accounting Policies

As inflation occurs, the accounting system reaction can take many different forms. One action is to require some form of inflation accounting such as revaluation or price level adjustments. Alternatively, other accounting principles can be changed that would help mitigate the distortions caused by inflation without changing the cost basis from historical cost.

Both LIFO and accelerated depreciation expense more recent costs and may reduce the need for inflation accounting. Reporting cash-flow information provides an alternative measure of firm performance and may also reduce the need for inflation accounting. In addition, countries that make more financial disclosures may be more likely to adopt inflation accounting as part of that increased disclosure.

**$H_{12}$:** Countries using inflation accounting are less likely to use LIFO or accelerated depreciation than countries using historical cost.

**$H_{13}$:** Countries using inflation accounting report less cash flow information than countries using historical cost.

**$H_{14}$:** Countries using inflation accounting make more financial disclosures than countries using historical cost.

## DATA

The sample for this study consists of the 46 countries included in *International Accounting and Auditing Trends, 1995*. This database is used to classify countries into using one of three financial statement cost bases: historical cost, historical cost with some revaluation, and price level adjustment. A country is classified based on the most frequently used method by companies in that country as determined by examination of annual reports from 1993 or 1992. As a result, accounting practice, not regulation, is measured, allowing a study of how characteristics influence reporting behavior.

Inflation data was gathered from the *International Monetary Fund International Financial Statistics* for the period 1968 to 1993. The Consumer Price Index was used to measure inflation for the countries. This measure was selected because it was used in inflation accounting standards as a measure of general price level movement and because it was the only consistently available price level measure for all countries. Two of the 46 countries were not listed in this publication. To ensure a consistent measure of the inflation rate, these observations were omitted, leaving a final sample of 44 countries.

Cultural dimension scores were gathered from Hofstede (1991), legal system family (common law or code law) from Salter and Doupnik (1992) or the *World Factbook Country Profiles* on Lexis–Nexis, the degree of accounting regulation from Cooke and Wallace (1990), micro- or macro-economic orientation from Berry (1987), and economic

**Table 1.** Cost Basis Method and 25-Year Annual Inflation Rate

| *Historical cost* | *%* | *Some revaluation* | *%* | *Price level adjustment* | *%* |
|---|---|---|---|---|---|
| Austria | 4.65 | Australia | 7.94 | Argentina (1973–1993) | 168.35 |
| Canada | 6.24 | Belgium | 5.39 | Brazil | 164.37 |
| Germany | 3.74 | Denmark | 6.90 | Chile | 51.04 |
| Greece | 15.41 | Finland | 7.69 | Columbia | 21.67 |
| India | 8.15 | France | 6.88 | Israel (1971–1993) | 54.68 |
| Japan | 5.12 | Ireland | 9.41 | Malaysia | 4.19 |
| Netherlands | 4.70 | Italy | 10.25 | Mexico | 32.56 |
| Pakistan | 8.96 | Kenya | 13.16 | Peru | 121.65 |
| Portugal | 15.59 | Korea | 17.05 | Turkey | 40.23 |
| Spain | 10.64 | Luxembourg | 5.08 | Uruguay (1979–1993) | 56.40 |
| Sri Lanka | 10.03 | New Zealand | 9.87 | Venezuela | 16.59 |
| Switzerland | 4.11 | Nigeria | 19.11 | | |
| Thailand | 6.25 | Norway | 7.26 | | |
| United States | 5.87 | Philippines | 13.47 | | |
| | | Singapore | 3.79 | | |
| | | South Africa | 11.88 | | |
| | | Sweden | 7.75 | | |
| | | United Kingdom | 8.89 | | |
| | | Zimbabwe | 12.11 | | |
| Median | 6.25 | Median | 8.89 | Median | 51.04 |

*Note:* Price-level data for 1968 was unavailable for Argentina, Israel, and Uruguay. In each case, the earliest data available, as indicated in parentheses, was used to compute the inflation rate.

development was based on classification of developed or emerging as found in the *World Development Report, 1995*. The following data was gathered from *International Accounting and Auditing Trends, 1995* for each country: key conclusion words used in auditors' report, total disclosure index, funds flow statement disclosure index, inventory costing method, and depreciation method. Accounting professionalism is measured using the key conclusion words used in the auditors' report. The inventory costing method and depreciation method are used to examine the role of other accounting policies mitigating the effect of using historical cost. The funds flow statement disclosure index and total disclosure index are used to examine the relationship between disclosure and cost basis.

## ANALYSIS OF RESULTS

Table 1 provides the countries used in the study, grouped by financial statement cost basis, and the average annual inflation rate during the 25 years ended 1993. Table 1 indicates that no clear inflation rate cutoff exists between those countries where inflation accounting is used and those where it is not used. However, a cutoff inflation rate of 20% properly classifies 42 of 44 countries as historical cost/some revaluation (HC/SR) or price level adjustors (PL). This classification is significantly better than classifying all countries as HC/SR at the 0.5% confidence level.

Table 2 presents descriptive statistics for the variables considered organized by the cost basis used. The Mann–Whitney test was used to determine the significance of the variables related to the inflation rate, national culture, accounting regulation, the disclosure index,

**Table 2.** Descriptive Statistics

| | Historical cost | | Some revaluation | | Price level | |
|---|---|---|---|---|---|---|
| *Test variable* | *N* | *Median* | *N* | *Median* | *N* | *Median* |
| Inflation (%) | 14 | 6.25 | 19 | 8.89 | 11 | 51.04 |
| Culture | | | | | | |
| Power distance | 13 | 54 | 15 | 36 | 11 | 66 |
| Individualism | 13 | 51 | 15 | 71 | 11 | 30 |
| Uncertainty avoidance | 13 | 65 | 15 | 49 | 11 | 82 |
| Masculinity | 13 | 56 | 15 | 54 | 11 | 49 |
| Accounting system | | | | | | |
| Regulation | 12 | 2.37 | 17 | 2.80 | 9 | 2.54 |
| Other accounting policies | | | | | | |
| Funds flow index | 14 | 76.5 | 17 | 77 | 8 | 76.50 |
| Total disclosure index | 14 | 71.5 | 17 | 78 | 8 | 69.5 |

and the funds flow index in determining the cost basis used. Table 3 presents the results of these tests. Column one shows the results of the tests comparing HC countries to SR countries, column two compares SR countries to PL countries, and column three compares HC countries to PL countries. The hypotheses for uncertainty avoidance and accounting regulation require that these variables be examined for high and low inflation countries separately. Thus, no direction is included in Table 3.

SR countries have marginally significant higher inflation than HC countries, though the difference is small compared to PL countries. SR countries also have significantly lower uncertainty avoidance and a significantly higher total disclosure index. These differences are all in the predicted direction, given generally low inflation.

Column two compares SR countries to PL countries. Inflation, power distance, individualism, uncertainty avoidance, and total disclosure index are significantly different. The results are consistent with the model for price index. Thus, inflation is an important factor in determining whether SR or PL will be used. The results are inconsistent for power distance and individualism. Uncertainty avoidance will be analyzed further later in the paper. These differences imply that the cultural dimensions of these countries differed in an unexpected direction. Comparing SR and PL countries may be complicated by the fact that both are using some inflation accounting methods. The SR group of countries are a mix of HC and inflation accounting. Interpreting the results of comparing SR and PL indicate the factors that lead countries to use one method versus another to adjust for the effects of inflation. Level of inflation was shown to be important with more comprehensive inflation accounting models being used where higher inflation exists. The fact that disclosure is higher for SR may also reduce the need for more formal inflation adjustment. Cultural differences were also shown to be important factors. SR countries were shown to be less tolerant of differences in power among members of society and more individualistic than PL countries. These results could be interpreted as citizens of SR countries perceiving the revaluations as sufficient to reduce power inequities in the search for additional firm specific information and the individualism of those countries requiring individual effort to do any additional price-level adjusting.

**Table 3.** Results of Mann–Whitney Tests

| | | *HC vs. SR* | | *SR vs. PL* | | *HC vs. PL* | |
|---|---|---|---|---|---|---|---|
| *Test variable* | *Sign*[a] | *SR–HC*[b] | *p-value* | *PL–SR*[b] | *p-value* | *PL–HC*[b] | *p-value* |
| Inflation | $H_1+$ | 2.6 | 0.0701* | 42.2 | 0.0002*** | 44.8 | 0.0002*** |
| Power distance | $H_2-$ | −18 | 0.2447 | 30 | 0.0228** | 12 | 0.0075*** |
| Individualism | $H_3+$ | 20 | 0.1025 | −41 | 0.0008*** | −21 | 0.0111** |
| Uncertainty avoidance | | −16 | 0.0310** | 33 | 0.0044*** | 17 | 0.1010 |
| Masculinity | $H_6+$ | −2 | 0.2595 | −5 | 0.4077 | −7 | 0.2714 |
| Accounting system | | | | | | | |
| Regulation | | 0.4 | 0.1117 | −0.2 | 0.2767 | 0.2 | 0.2069 |
| Other accounting policies | | | | | | | |
| Funds flow index | $H_{13}-$ | 0.5 | 0.2997 | −0.05 | 0.4764 | 0 | 0.1944 |
| Total disclosure index | $H_{14}+$ | 6.5 | 0.0090*** | −8.5 | 0.0205** | −2 | 0.3791 |

*Notes:* [a] Hypothesized sign for more likely use of inflation accounting.
[b] Difference in medians for inflation use less noninflation use.
* Significant at the 10% level.
** Significant at the 5% level.
*** Significant at the 1% level.

The test of HC countries and PL countries is shown in column three. The results show a significant difference in the predicted direction for inflation. Inconsistent significant differences are shown for the power distance and individualism measures. The determinants of inflation accounting model presented did not fully explain the cost basis choice, but it does indicate that inflation and culture are important factors in influencing the cost basis decision. PL countries have significantly higher inflation and are more tolerant of differences in power among individuals and less individualistic. Both of these results would, according to Gray (1988), lead to situations with lower disclosure.

To test uncertainty avoidance, the sample with uncertainty avoidance indexes was split into high- and low-inflation groups around the median inflation level. To examine $H_4$, the 21 countries with inflation levels below the median were categorized into their respective cost bases. Because there was only one PL country, PL and SR were combined for this test. The subsample consists of 10 HC countries and 11 SR or PL countries. $H_4$ predicted that, given low inflation, low-uncertainty-avoidance countries would be more likely to adopt inflation accounting. The median uncertainty-avoidance score for HC countries is 61. The median uncertainty-avoidance score for SR/PL countries is 36. The six lowest uncertainty-avoidance scores belong to SR/PL countries. Classifying these six as SR/PL and the rest as HC properly classifies 16 of the 21 countries. This classification is significantly better than classifying all countries as SR/PL at less than the 5% confidence level. The Mann–Whitney test also indicates that HC countries have higher uncertainty scores than SR/PL countries at less than the 5% confidence level. Thus, low-uncertainty avoidance countries with low inflation are more likely to use SR or PL than HC, supporting $H_4$.

$H_5$ predicted that, given high inflation, high-uncertainty-avoidance countries are more likely to adopt inflation accounting. The test used the 18 observations with inflation levels above the median. The subsample consists of three HC, five SR, and 10 PL countries. The median uncertainty avoidance score for HC countries is 104, 49 for SR countries, and 83.5 for PL countries. The four lowest uncertainty-avoidance scores belong to SR countries.

**Table 4.** 2×2 Contingency Tables

| *Test variable* | *HC vs. SR* | | *SR vs. PL* | | *HC vs. PL* | |
|---|---|---|---|---|---|---|
| Accounting system | | | | | | |
| Accounting professionalism ($H_8$) | | | | | | |
| Conform | 3 | 3 | 3 | 3 | 3 | 3 |
| Fair | 11 | 15 | 15 | 6 | 11 | 6 |
| Fisher exact probability | 0.5399 | | 0.3046 | | 0.4348 | |
| Legal system | | | | | | |
| Legal family ($H_9$) | | | | | | |
| Common law | 5 | 10 | 10 | 2 | 5 | 2 |
| Code law | 9 | 9 | 9 | 8 | 9 | 8 |
| Fisher exact probability | 0.2715 | | 0.0956* | | 0.3570 | |
| Economic system | | | | | | |
| Economic orientation ($H_{10}$) | | | | | | |
| Micro | 3 | 10 | 10 | 3 | 3 | 3 |
| Macro | 4 | 4 | 4 | 6 | 4 | 6 |
| Fisher exact probability | 0.2129 | | 0.0857* | | 0.5490 | |
| Economic development ($H_{11}$) | | | | | | |
| Developed | 8 | 13 | 13 | 1 | 8 | 1 |
| Emerging | 6 | 6 | 6 | 10 | 6 | 10 |
| Fisher exact probability | 0.3809 | | 0.0021*** | | 0.0171** | |
| Other accounting policies | | | | | | |
| Inventory policy ($H_{12}$) | | | | | | |
| FIFO | 4 | 11 | 11 | 5 | 4 | 5 |
| Other | 10 | 8 | 8 | 4 | 10 | 4 |
| Fisher exact probability | 0.0932* | | 0.7014 | | 0.1959 | |
| Depreciation policy ($H_{12}$) | | | | | | |
| Straight line | 10 | 13 | 13 | 10 | 10 | 10 |
| Accelerated | 3 | 6 | 6 | 1 | 3 | 1 |
| Fisher exact probability | 0.8216 | | 0.1714 | | 0.3634 | |

*Notes:* * Significant at the 10% level.
** Significant at the 5% level.
*** Significant at the 1% level.

The uncertainty-avoidance scores are higher for all three HC countries than for the SR countries. This result is significant with probability 0.0179. Classifying the four lowest uncertainty-avoidance scores as SR and the other SR country as PL is significantly better than classifying all 15 SR and PL countries as PL at less than the 5% confidence level. Mann–Whitney tests found that uncertainty scores for HC countries are significantly higher than for SR or PL countries and that scores for PL countries are significantly higher than for SR countries. These results indicate that, for countries with high inflation, some countries with high uncertainty-avoidance scores remain with HC but most adopt PL. Countries with low uncertainty-avoidance scores are likely to adopt SR.

Likewise, $H_7$ predicted that, given high inflation, countries with greater accounting regulation are more likely to use inflation accounting. For the high inflation group, the median accounting regulation scores are 1.33 for HC countries, 3.01 for SR countries, and 2.68 for PL countries. Mann–Whiney tests indicate accounting regulation is significantly greater for both SR and PL countries than for HC countries. The difference between SR

**Table 5.** Results of Logit Models for HC vs. SR Countries (Coefficients and *t*-statistics)

| *Variable* | *n*[a] | *Constant* | *Log (INF)* | *Variable* | *Interaction* | *LRI*[b] | *LRT*[c] |
|---|---|---|---|---|---|---|---|
| *Inflation* | 14 | −2.4253 | 1.3191 | | | 0.0548 | 2.465 |
| | 19 | −1.321* | 1.504* | | | | 0.116 |
| Power distance | 13 | −18.1436 | 9.6282 | 0.2774 | −0.1470 | 0.1946 | 5.758 |
| | 15 | −1.935** | 4.777** | 1.730** | −1.813** | | 0.056* |
| Individualism | 13 | 5.5688 | −3.5739 | −0.2280 | 0.1317 | 0.2869 | 9.327 |
| | 15 | 1.010 | −1.357* | −1.857** | 2.093** | | 0.009*** |
| Uncertainty avoidance | 13 | −7.4818 | 5.3760 | 0.0323 | −0.0411 | 0.2616 | 8.349 |
| | 15 | −1.304 | −1.764** | 0.402 | −1.052 | | 0.015** |
| Masculinity | 13 | 8.7052 | −3.9827 | −0.2125 | 0.1004 | 0.1340 | 3.415 |
| | 15 | 1.215 | −1.125 | −1.570* | 1.488* | | 0.181 |
| Regulation | 12 | 3.2485 | −2.9234 | −3.3646 | 2.2817 | 0.2685 | 7.515 |
| | 16 | 0.489 | −0.911 | −1.117 | 1.510* | | 0.023** |
| Audit judgment | 14 | −5.8576 | 3.1753 | 1.0112 | −0.5586 | 0.0631 | 0.762 |
| | 18 | −0.881 | 1.000 | 0.582 | −0.678 | | 0.683 |
| Legal family | 14 | −6.7394 | 3.6422 | 2.6716 | −1.4671 | 0.0737 | 0.851 |
| | 19 | −0.859 | 1.010 | 0.614 | −0.723 | | 0.654 |
| Economic orientation | 7 | −6.7254 | 3.9113 | 1.9412 | −1.3072 | 0.2776 | 0.345 |
| | 13 | −1.455* | 1.633* | 0.309 | −0.395 | | 0.842 |
| Economic development | 14 | −5.6298 | 3.3491 | −5.9713 | 1.2820 | 0.2003 | 6.546 |
| | 19 | −1.769** | 1.914** | −0.747 | 0.380 | | 0.038** |
| Inventory policy | 14 | 1.4662 | 0.1415 | −1.7543 | 0.4972 | 0.1353 | 3.623 |
| | 19 | 0.273 | 0.055 | −0.808 | 0.484 | | 0.163 |
| Depreciation policy | 13 | −0.5489 | 0.5507 | −0.9002 | 0.3529 | 0.0436 | 0.292 |
| | 19 | −0.151 | 0.320 | −0.463 | 0.395 | | 0.864 |
| Funds flow index | 14 | 2.0192 | −3.1911 | −0.0784 | 0.0703 | 0.2187 | 6.737 |
| | 17 | 0.219 | −0.678 | −0.588 | 1.042 | | 0.034** |
| Total disclosure index | 14 | −15.2471 | −0.0121 | 0.1318 | 0.0395 | 0.3123 | 10.731 |
| | 17 | −0.529 | −0.001 | 0.336 | 0.228 | | 0.005*** |

*Notes:* [a] Number of observations HC/SR.
[b] Likelihood ratio index.
[c] Likelihood ratio test distributed approximately chi-square. For inflation, one degree of freedom. For other variables, the statistic tests for significance of the coefficient on the variable and interaction terms and has two degrees of freedom. The column reports *p*-values instead of *t*-statistics.
* Significant at the 10% level.
** Significant at the 5% level.
*** Significant at the 1% level.

and PL countries is not significant. Thus, greater accounting regulation is more likely to result in modifications to historical cost with high inflation.

The Fisher exact probability test (Siegel and Castellan, 1988) was used to determine the effect of audit judgement, legal family, economic orientation, economic development, inventory policy, and depreciation policy on inflation accounting. The results are presented in Table 4. Between HC and SR countries, the only significant result indicates that SR countries are somewhat more likely to use FIFO than HC countries. Thus, HC countries may be using LIFO to reduce the need for inflation accounting. Compared to SR countries, PL countries are more likely to have a codified legal system, a macroeconomic orientation, and an emerging economy. PL countries are also more likely to have an emerging economy than HC countries. These results are consistent with the hypotheses. The remaining results are not significant.

The Mann–Whitney and Fisher exact probability tests indicate that high inflation is the primary explanatory factor in the use of PL accounting instead of HC accounting. The only other significant variables in the analysis for those sets of countries were cultural variables and economic development. Likewise, the inflation rate is a very strong determinant of the choice between SR and PL accounting. The choice between methods of inflation adjustment is also influenced by culture, legal system, economic system, and disclosure, but the inflation rate alone would indicate which method of inflation accounting is used for all countries except Malaysia and Venezuela.

Inflation rate is less useful in the analysis of HC and SR countries. While SR countries do have significantly higher inflation, there is a great deal of overlap in the levels of inflation for countries in both groups (see Table 1). To further investigate the role of the other variables considered on the choice between HC and SR, Logit models were estimated to examine the incremental explanatory power of the variables while controlling for inflation.

Table 5 presents the results of Logit models for HC versus SR countries.[1] The first model includes only the natural logarithm of inflation as an independent variable. The coefficient is marginally significant, consistent with the Mann–Whitney test presented in Table 3.

The other models each add a study variable and an interaction term between the study variable and the natural logarithm of inflation. Significance is measured using the likelihood ratio test (Kmenta, 1986). This statistic measures the incremental explanatory power of the study variable and the interaction term over inflation. Results indicate that power distance, individualism, uncertainty avoidance, accounting regulation, economic development, funds flow statement disclosure index, and total disclosure index are significant. These results indicate that inflation is not the only factor that influences the choice between HC and SR. Culture, the accounting regulatory environment, economic development, and disclosure policies within the financial reporting framework of the country are also important in determining whether HC or SR is chosen as the cost basis.

Analysis of the PL countries requires judgment. Since inflation alone properly classifies 42 of the 44 countries as HC/SR versus PL (see Table 1), other variables cannot be incrementally significant in the choice. Therefore, Logit models were not estimated for the PL choice. Furthermore, eight of the 11 PL countries are in the Americas, creating the possibility that these countries drive the results. To test this possibility, the significant variables in Tables 3 and 4 were compared between the eight American PL countries and the other three PL countries. In all cases, Turkey resembles the American PL countries. Furthermore, Israel and Turkey have relatively high, and Malaysia relatively low, uncertainty avoidance, all consistent with the hypotheses. However, Israel has a low power distance and a high individualism score relative to the other PL countries and a developed economy, suggesting that the significance of these three variables may be driven by the American countries. Malaysia has a microeconomic orientation. Israel and Malaysia are the two PL countries with a common law system. One may conclude, then, that PL countries tend to have high inflation and high uncertainty avoidance.[2]

## SUMMARY AND CONCLUSION

This study investigates factors that may affect how accounting entities in different countries account for inflation. Tests indicate that countries that use PL have higher inflation than either countries that use HC or countries that use HC with SR. PL countries also tend to have higher uncertainty avoidance.

Tests indicate that inflation plays a much smaller role in the choice between HC and SR. Cultural variables (power distance, individualism, and uncertainty avoidance), accounting regulation, economic development, and other accounting policies (funds flow disclosure, overall disclosure, and inventory accounting methods) also influence the choice between HC and SR.

These results suggest that inflation accounting is determined by both the inflation rate and cultural, accounting regulation, economic, and financial statement disclosure factors. Inflation seems to be the dominate factor in determining adoption of price level adjustments and the cultural, regulatory, and disclosure variables are more important in distinguishing between historical cost and some revaluation. Economic system factors seem to influence both choices.

This study also demonstrates the need for an improved understanding of factors that affect reporting at the cross-national level. These results were consistent with the predicted effects of inflation and uncertainty avoidance, but were opposite the predicted effects for the other cultural variables, individualism and power distance. These cultural results are consistent with other accounting studies that have found uncertainty avoidance to be one of the most important of the cultural variables (Fechner and Kilgore, 1994; Salter and Niswander, 1995). Disclosure was greatest for SR instead of PL countries. No significant effects were found for several other factors thought to influence the adoption of PL accounting. Further research is needed to clarify these relationships.

This paper made an initial effort into the investigation of the relationship between country specific characteristics (culture, economic, legal, and accounting systems) and accounting policy selection. Additional research on other accounting policies is also needed to determine if these results are generalizable to accounting policy choice differences at the national level. If cultural and national systems differences explain the differences in accounting policy choice for most policies, then international accounting harmonization may be difficult to achieve without allowing choices consistent with current use. Standard setters as well as users of nondomestic financial reports would benefit from an increased understanding of the role that culture, national systems, and disclosure play on policy choice selection. If generalizable relationships exist, then investors may find comparisons of reports across countries easier. This could improve investors' ability to make international investments. Choi and Levich (1991) indicate that approximately half of the investors do not make as many international investments as they would like because of difficulties in interpreting financial statements of nondomestic companies. A better understanding of why certain policies are generally chosen in some countries may help investors make the appropriate adjustments to statements to compare companies across international boundaries and therefore move toward more optimal allocations of financial capital.

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## NOTES

1. None of the explanatory variables are significantly correlated with inflation.
2. Cooke and Wallace (1990) identify countries that have primarily borrowed their accounting standards from another country. The four countries in this study so identified are Nigeria, Philippines, Singapore, and Zimbabwe. All tests were run omitting these four countries. Few differences resulted. In Table 3, power distance became significantly negative and individualism became significantly positive for HC vs. SR. Legal system and economic orientation for SR vs. PL and inventory for HC vs. SR all lost significance in Table 4. While some changes occurred in the significance of various coefficients in Table 5, there were no changes in the incremental significance of the variables over inflation. Thus, the results reported in the paper are for the whole sample.

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# Voluntary Environmental and Social Accounting Disclosure Practices in the Asia-Pacific Region: An International Empirical Test of Political Economy Theory

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**Key Words:** Environmental; Social; Asia-Pacific; Disclosures; Political economy

***Abstract:*** *The principal objective of this paper is to provide empirical evidence on the significance of cross-country (societal) variables that may assist in explaining variations in the quantity of voluntary environmental and social accounting disclosure (VESAD) information provided by organizations in annual reports across national boundaries. Using content analysis (number of sentences), 356 listed companies operating in seven Asia-Pacific nations (Australia, Singapore, Hong Kong, the Philippines, Thailand, Indonesia and Malaysia) were surveyed. Empirical tests (multiple regression analysis) conducted found that two cultural dimensions (uncertainty avoidance and masculinity) and political and civil systems are significant determinants of the quantity of VESAD information supplied by listed companies in these countries. In contrast, the legal system and equity market do not appear to be important factors in explaining variations in VESAD levels across these countries. In conclusion, it is argued that the socio-political and economic system of a nation interact to shape the perceptions of organizations in the need to release VESAD that meet social expectations as well as to avoid government regulation to preserve their own self-interests. This is consistent with Bourgeois political economy theory.*

The objectives of the research reported on in this paper are threefold. First, this study seeks to determine whether there are any significant differences in the amount and type of voluntary environmental and social accounting disclosures (VESAD)[1] across companies representing seven sample countries in the Asia-Pacific region. These countries are Australia, Singapore, Hong Kong, the Philippines, Thailand, Indonesia, and Malaysia. Second, this research attempts to identify factors at the societal (inter-country) variable level that may assist in explaining any cross-national differences. Finally, this project attempts to investigate whether the modern liberalism views of Bourgeois political economy theory provide a relevant theoretical framework to aid in explaining VESAD practices. Findings from multiple regression analysis suggest that there are significant

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differences in VESAD practices among companies operating in the seven Asia-Pacific countries. Organizational size, industry type, cultural factors and the political and civil systems in part, can explain variations in the quantity of VESAD. Results from this study provide support for Bourgeois political economy.

Empirical research has indicated an increase in the amount of environmental and social accounting disclosed by companies over the past decades (Gray et al., 1996). The emergence of well-organized and vocal interest groups, such as anti-apartheid movements, Amnesty International and Greenpeace, has coincided with the increase in VESAD. The role of these interest groups has been to draw attention to the incongruity between organizational actions and the values of society (Arnold and Hammond, 1994). Some accounting researchers argued, therefore, that the increase in public and political statements being made by organizations on environmental and social accounting issues,[2] is directly associated with more intensive social and political pressures applied by interest groups (Millstone and Watts, 1992; Neu et al., 1996; Walden and Schwartz, 1997).

Environmental and social accounting disclosures are seen by some as a mechanism that organizations utilize in order to enhance their status, provide information to stakeholders and discharge the social contract between the entity and the relevant public (Gray et al., 1988). Guthrie and Parker (1990, pp. 171–172) stated that environmental and social accounting disclosures "appeared to reflect public social priorities, respond to government pressure, accommodate environmental pressures and sectional interests and protect corporate prerogatives and projected corporate images."

International comparative studies of environmental and social accounting disclosures are limited and largely only descriptive in nature (Roberts, 1990; UNTEC, 1992; Adams et al., 1995). International research is further limited in that the majority of studies focus on developed nations, particularly the United States, Australia, the United Kingdom, and countries in Western Europe. The lack of consensus on a relevant theoretical framework for studying VESAD practices may be one factor inhibiting intensive investigation of this phenomenon (Gray et al., 1995a). Nonetheless, the existing literature has noted the importance of country of origin as a determinant of environmental and social disclosures and significant variations in practices across national boundaries (Andrews et al., 1989; Hackston and Milne, 1995; Gray et al., 1996). Few attempts, however, have been made to identify factors at the inter-country level that possibly explain significant variations. Roberts (1990, p. 69) commented in respect to national variations, "more need to be known regarding the reasons for disclosures (or lack of disclosures)."

The contribution of this study is important for several reasons. First, this project will provide details of VESAD practices from nations in the Asia-Pacific region that have previously received little attention from researchers. Second, factors that potentially explain significant differences in VESAD practices across national boundaries are empirically tested. In addition, such tests also identify the relevance of a theoretical perspective that may provide a foundation for future research and developments in this area. Finally, investigation of the objectives will provide insight and information that will assist international accounting standards committees in developing environmental and social accounting disclosure policies that promote harmonization.

The remainder of this paper is organized as follows. The section Theoretical Framework — Political Economy Theory outlines the overarching theoretical framework applied

in this paper. Independent variables are considered and testable hypotheses are developed in the section Hypothesis Development. The research method used in this study is then explained in the section Research Method followed by the section Data Analysis and the results of empirical tests. Implications from the findings are discussed in the section Discussion of Results. Finally, conclusions and ideas for future research are outlined in the section Concluding Remarks and Future Research.

## THEORETICAL FRAMEWORK — POLITICAL ECONOMY THEORY

Bourgeois political economy,[3] a derivative of the modern liberalism perspective,[4] is being increasingly utilized in VESAD research. Based on traditional roots of classical liberalism, this strand of political economy adopts a wider set of features incorporating ideas from the radical dimension such as notions of social justice and community harmony. As noted by Clark (1991, p. 87), the modern liberalism point of view is of an "eclectic and hybrid nature, which makes it less pure than other ideologies, but contributes greatly to its flexibility and resiliency."

The seminal work by Ramanathan (1976) adopted the Bourgeois political economy perspective in deriving the concept of a 'social contract,' suggesting that the existence of an organization relies on the support of society in general. If it is perceived that a firm is engaging in undesirable social activities, then it is likely that society will withdraw its endorsement of the enterprise, leading to its demise. In order to avoid this situation, and to maintain their position in society, it is conjectured that management may release information related to their environmental and social activities. Guthrie and Parker (1990) supported this view, arguing that Bourgeois political economy offered a number of valuable insights to explain VESAD practices.

Bourgeois political economy concentrates on the interactions of actors within a pluralistic world (Clark, 1991, p. 90). This implies that a number of different individuals, institutions and organizations, seeking to preserve their own self-interests, attempt to operate within the system through various relationships with others (see, e.g., Dahl, 1982, 1986). The theory emphasizes that actors, whether they are individuals or organizations, have the right to pursue their own goals and self-interests (Clark, 1991). These rights, however, are moderated by the social environment in which they exist (Gray et al., 1996).

Bourgeois political economy also considers the role of the government. Proponents argued that governments play an important part in protecting the interests of individuals seeking to achieve their objectives (Okun, 1970; Shapiro, 1986). Clark (1991) argued that government intervention is particularly advantageous in the face of market failures such as imperfect competition, externalities, instability, inequality and socially undesirable outcomes. If the activities of the organization impinge on, or are perceived to impinge on, the wider community, governments may intervene to protect individual rights within the community (Gray et al., 1995a). However, intervention may jeopardize the self-interests and goals of the enterprise (Guthrie and Parker, 1990).

Management may, therefore, provide VESAD information for two purposes. First, management may make environmental and social disclosures to protect their self-interests in order to foster, sustain and legitimize relationships by presenting an image of supporting

society in general. Second, management may release VESAD-related details in order to avoid possible regulatory intervention.[5] Based on the general principles of modern liberalism embodied in Bourgeois political economy, this paper further argues that firms provide VESAD information in response to the pressures of the social, political and economic systems that surround them. It is, therefore, suggested that cross-national differences in the quantity of VESAD information released may be due to variations in country-level characteristics that shape the socio-political and economic systems of respective countries.

## HYPOTHESIS DEVELOPMENT

Thomas (1991, p. 42) utilized the term *societal variables* to describe "factors to which all enterprises within a particular country are subject and which vary between nations." Five societal variables identified from a review of the international comparative research that are considered to influence the social, political, and economic environments and the accounting systems of a nation are discussed below.

### Culture

Culture was defined by Hofstede (1980, p. 26) as "the collective programming of the mind which distinguishes the members of one human group from another." Hofstede (1980) derived four bi-polar cultural dimensions from data collected on values from an attitude survey of employees of subsidiaries of IBM in 49 nations and four sub-regions. Two (strong versus weak uncertainty avoidance and masculinity versus femininity) appear most relevant to this study.[6] Gray (1988) argued that uncertainty avoidance and masculinity affected accounting disclosure practices via the subcultural value of secrecy.[7]

Gray (1988) suggested that social environments with higher levels of uncertainty avoidance have a preference for secrecy. Organizations in this social arena perceive a need to restrict information to avoid possible conflicts and uncertainties of competition, and to ensure the preservation of security. Based on this notion, management may be more inclined to limit the amount of voluntary information, including VESAD details, in social situations where uncertainty is high since the cost of disclosing may outweigh the benefit.[8] This view is consistent with the views of Guthrie and Parker (1990) who suggested that companies may limit, or make no disclosure on, VESAD issues since this information could be seen as detrimental to the self-interests of the organization. Consequently, the first hypothesis is:

> **$H_1$:** There is a negative association between the level of uncertainty avoidance and the extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region.

For masculinity versus femininity, Gray (1988) suggested that social information is more closely related to feminine traits in society. Communities with a lower masculine bias are more likely to be caring and conscious of the effects of a company's activities

on society. Therefore, with respect to this cultural factor, firms operating in more masculine-biased societies are likely to encounter lower social expectations and demands for informa-tion related to environmental and social matters. Thus, the following hypothesis is formed:

**$H_2$:** There is a negative association between the level of masculinity and the extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region.

## Political and Civil System

Belkaoui (1985) hypothesized that as political and civil violations and repression increase, the extent of reporting and disclosure by organizations will decrease. The degree of political and civil freedom in a given country is generally assumed to depend on the degree of political rights[9] and civil liberties[10] in the associated political and civil structure (Gastil, 1990). Violations of political rights and civil liberties associated with various forms of political structure restrict political and civil freedom in general and may therefore act as a hindrance to full and fair disclosure (Lin, 1993). Gastil (1990) stated that as political and civil violations and repression increase, influence and effectiveness of social interest bodies (such as environmental bodies and charity groups) and human resource organizations (such as trade unions) diminish. Power and influence thus become centralized toward one party or even to a few key individuals. Under a repressive regime, organizations face lower social expectations and pressure and are only required to justify their operations to a select group (Iqbal et al., 1997). In a more open community with greater freedom, firms may need to provide greater justification for why they should be allowed to continue to operate.

Empirical research testing the relationship of political and civil systems to accounting practices has been relatively limited. Goodrich (1986) tested this relationship by comparing a set of five accounting groups based on a statistical methodology of applying accounting practices to political science groupings. Goodrich (1986) also drew upon national groupings related to similarities in political attitudes and membership and voting records in international organizations. According to Goodrich (1986, p. 23) "political factors, like political system types and international organizational membership, are significantly linked to the accounting groups."

Based on the above discussion it is viewed, for the purposes of this study, that organizations in less-repressed societies will have a greater incentive to disclose VESAD information in response to greater social expectations for organizations to conform to a broader set of societal interests. Conversely, firms in a more repressed social structure may be inclined to limit VESAD disclosures or make none at all for fear of greater government scrutiny and regulation.

**$H_3$:** There is a negative association between the level of political and civil repression and the extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region.

## Legal System

David and Brierley (1985) identified three major families of legal systems: (1) Romano–Germanic (Code) law; (2) common law; and (3) socialist law.[11] The legal system is part of an institutional framework within which an accounting system interacts (Iqbal et al., 1997). Salter and Doupnik (1992) suggested that the effect of the legal system on accounting practices is not determined by the number of accounting rules but by the extent that accounting rules are determined by law.

Romano–Germanic law is characterized by rules formulated by legal scholars, based on ideas of justice and morality (Salter and Doupnik, 1992). These rules of law form a detailed framework designed to resolve any legal issue. Accounting standards, practices and procedures in nations with Romano–Germanic law are extensively codified in company law or commercial codes (Arpan and Radebaugh, 1985). These rules are largely set by national legislators (Mueller et al., 1994). In contrast, common law is developed primarily through decisions made by judges in the course of resolving specific disputes (Salter and Doupnik, 1992). Legal rules aim to provide a solution to the case at hand rather than formulate a general rule of conduct for the future. This system does not traditionally impose a large number of detailed, all encompassing requirements on business entities (Salter and Doupnik, 1992). Accounting practices under common law systems are largely determined by accountants themselves and thus tend to be more adaptive and innovative (Mueller et al., 1994).

Consequently, it is argued that firms in a socio-political and economic environment emphasizing regulatory development (including those for accounting) within legal legislation have a greater incentive to disclose information. Corporations may fear additional pressure from the potential imposition of regulatory intervention that could jeopardize their interests. To minimize such an occurrence and to preserve an organization's right to self-determination, additional voluntary information including those of a VESAD-nature, may be released. Enterprises under a legal system not intent upon defining rules within legislative acts may face lower social expectations, thereby having less inducement to disclose VESAD details. The following hypothesis is thus formed:

**$H_4$:** There is a positive association between the Roman–Germanic legal system and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region.

## Level of Economic Development

Conceptual studies of accounting and socio-political and economic systems have identified economic factors as important determinants of the development of accounting and reporting practices (Mueller, 1967; Radebaugh, 1975; Choi and Mueller, 1984; Arpan and Radebaugh, 1985). A factor that has received extensive attention recently is the level of economic development (Cooke and Wallace, 1990; Adhikari and Tondkar, 1992; Ahmed, 1995; Doupnik and Salter, 1995; Salter, 1998). Theoretically, there should be a positive impact on the level of disclosures and reporting practices in a given nation as the level of economic development increases (Doupnik and Salter, 1995). Empirical research

examining the influence of the level of development on accounting practices has produced inconclusive results. Adhikari and Tondkar (1992) and Ahmed (1995) found no association between the respective variables. However, Cooke and Wallace (1990), Doupnik and Salter (1995) and Salter (1998) indicated that the level of economic development was a significant explanatory variable of noted variations in accounting practices.

Gordon (1990) stated that as the level of economic development increases, demands for better living conditions, education, work safety and training would also become greater. Moaddel (1994) argued that any improvements resulting from economic development should benefit all within society rather than a limited sector. He argued that greater economic development will be accompanied by a growth in the number and strength of pressure and monitoring groups, such as labor unions and consumer bodies, that seek to ensure an equitable distribution of benefits derived from enhanced economic wealth. For example, labor unions will be concerned with ensuring that employees receive appropriate salaries and working conditions consistent with the economic conditions of the nation. Faced with pressure groups that are better organized, financed, and articulated, firms in more developed economies will encounter greater pressure to ensure that their operations do not impinge on any one group or society at large, and are effective and efficient in not producing undue negative externalities. Governments are another body placing pressure on firms to ensure that greater economic development provides benefits to the majority rather than just an individual firm. Faced with the possibility of this additional pressure, VESAD details would be an effective means for organizations to present a responsible image, thereby preventing government regulation. Therefore, the following hypothesis is advanced:

**$H_5$:** There is a positive association between the level of economic development and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region.

### Equity Market

Barrett (1977) provided empirical evidence from a study of the quantity of corporate disclosure to support his hypothesis that differences in the extent of accounting information disclosure between countries may be explained by the variation in the degree of efficiency of the equity market.[12] Two reasons are offered in the extant literature to explain the results of Barrett (1977). First, as the size of the capital market increases, both potential and existing buyers and sellers interested in shares and other securities exert pressures on companies to disclose more information (Gray et al., 1984). Doupnik and Salter (1995) stated that "a strong equity market with a diverse group of shareholders has generally been viewed as conducive to the production of sophisticated information." Second, Doupnik and Salter (1995) also argued that as the level of activity within a market increases, stakeholders would demand more extensive information about an organization's activities to assist in differentiating between entities for investment purposes. Competition for scarce investment capital may be an incentive for firms to provide greater details to the market.

The relevance of VESAD information to equity investors has been examined in a number of studies (Belkaoui, 1976; Ingram, 1978; Anderson and Frankle, 1980; Freedman

and Jaggi, 1982, 1986, 1988).[13] Empirical research supports the suggestion that VESAD details provide information for investors (Freedman and Stagliano, 1992; Mangos and Lewis, 1995; Neu et al., 1996). If a new environmental standard were released, e.g., disclosure of environmental information would enable investors to determine whether the entity will be able to meet the necessary requirements. Firms unable to meet the requirements of the new standards would subsequently be devalued. Since VESAD information is of importance to investors, firms have an incentive to provide this information. Disclosures are made in order to construct, sustain and legitimize the position of the organization in the minds of investors.

Investors are interested in VESAD information since it is relevant to decision making on equity investments and changes in the size and turnover of the equity market (Barrett, 1977; Doupnik and Salter, 1995). VESAD, therefore, also affects the quantity of details demanded with respect to environmental and social accounting issues. The effect of the equity market is tested by two hypotheses, one related to size and the other related to level of activity, as follows:

**$H_6$:** There is a positive association between the size of the equity market and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region.

**$H_7$:** There is a positive association between the turnover of the equity market and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region.

### Control Variables

Prior researchers have argued that organizational size, economic performance and industry type may act as intervening factors and therefore should be controlled for (Cowan et al., 1987; Roberts, 1992). Researchers have theorized that the quantity of VESAD released by corporations appears to be positively related to organizational size (Cowan et al., 1987; Belkaoui and Karpik, 1989; Patten, 1992). Roberts (1992) also provides a theoretical argument implying a positive relationship between the quantity of VESAD and economic performance. Empirical evidence, however, is inconclusive on this association (Freedman and Jaggi, 1988; Patten, 1991; Mangos and Lewis, 1995). Although empirical findings on the effects of industry type imply some form of relationship, the results are not entirely conclusive. AlNajjar (1995) argued that this makes it difficult to determine the true nature of the association.

## RESEARCH METHOD

### Sample Population

The initial sample population for this study was drawn from publicly listed companies in one of the seven study nations on 31 December 1994.[14] This cut-off date was adopted to ensure that companies selected for sampling were able to supply annual reports for the full

**Table 1.** Descriptive Statistics for Dependent Variable

| *Country* | *Number of firms contacted* | *Number of firms responding* | *Response rate (%)* | *Number of firms reporting on at least one VESAD issue* | *Percentage of firms reporting on at least one VESAD issue* | *Average number of sentences of VESAD*[a] |
|---|---|---|---|---|---|---|
| Australia | 100 | 95 | 95.00 | 78 | 82.11 | 17.65 |
| Singapore | 100 | 77 | 77.00 | 38 | 49.35 | 26.58 |
| Hongkong | 100 | 48 | 48.00 | 37 | 77.08 | 9.62 |
| Philippines | 65 | 20 | 30.77 | 19 | 95.00 | 21.05 |
| Thailand | 100 | 28 | 28.00 | 18 | 64.29 | 29.50 |
| Indonesia | 100 | 34 | 34.00 | 29 | 85.29 | 11.31 |
| Malaysia | 100 | 54 | 54.00 | 40 | 74.07 | 12.03 |
| Overall | 665 | 356 | 53.53 | 259 | 72.75 | 17.31 |

[a] The average number of sentences is determined from the total number of sentences of a VESAD nature divided by the umber of firms providing at least one sentence on a VESAD issue.

12 months of the 1995 financial year. Organizations with main headquarters not located in the country in which they were listed were subsequently removed from the sample to minimize external influences. One hundred listed companies from each country were then randomly selected from the remaining sample population.[15] Each company was sent a letter requesting their 1995 English version annual report. The overall response rate was 53.53%[16] (see Table 1 for a breakdown of the response rate for each nation). This compares well with other reported rates for studies in which foreign annual reports were requested. Eddie (1996a,b), e.g., achieved a response rate of 60.13% in a study covering 10 nations in the Asia-Pacific region.

## Dependent Variable Measurement — Quantity of VESAD

For the purposes of this study the dependent variable, quantity of VESAD information (QV), is measured using content analysis. This technique has been readily applied in VESAD-based research (Gray et al., 1995b). Content analysis was defined by Abbott and Monsen (1979, p. 504) as "a technique for gathering data that consists of codifying qualitative information in anecdotal and literary form, into categories in order to derive quantitative scales of varying levels of complexity." Krippendorf (1980, p. 21) further stated that "content analysis is a research technique for making replicable and valid inferences from data according to their context."

A checklist instrument outlining the criteria for identifying disclosures as VESAD in nature was designed in order to codify the qualitative information contained in annual reports. Definitions applied in the checklist instrument were derived from an extensive review of the literature (Ernst and Ernst, 1976; Cowan et al., 1987; Belkaoui and Karpik, 1989; Guthrie and Parker, 1989, 1990; Patten, 1991, 1992, 1995; Gray et al., 1995a; Hackston and Milne, 1995; Gray et al., 1996). Attempts were made to ensure that each definition was unambiguous and mutually exclusive of others so as to eliminate any overlapping of interpretations. Two independent reviewers[17] critiqued the checklist for clarity of language and meaning. Based on comments from this review, minor modifications were made to the checklist.[18] A copy of the modified

checklist was distributed to select accounting academics from each of the seven nations for additional comments. From remarks received, further adjustments were made to the checklist instrument to reflect some factors specific to the Asia-Pacific nations investigated.[19]

Prior to analyzing the 1995 annual reports, the checklist instrument was pretested using fourteen 1994 annual reports[20] in two phases by the author and two independent professional accountants. Some minor modifications were made following each phase of pretesting.[21] The final checklist instrument is presented in Appendix A. The final checklist instrument contained no mandatory disclosure requirements for the period under examination in any of the seven study nations involved in this study.[22]

Some debate surrounding content analysis pertains to the 'unit of analysis' used by researchers in measuring QV (Gray et al., 1995b). They (Gray et al., 1995b) noted that words, sentences and pages were the preferred units of analysis in written communication. Theoretical literature does not provide an overwhelming justification for the choice of any one of the three units of analysis over the others. Hackston and Milne (1995) are critical of the application of words, describing it as an ambiguous measure. Ingram and Frazier (1980) used sentences as the unit of analysis. They (p. 617) chose this method stating that "the sentence was selected as the unit of analysis for the final research since a sentence is easily identified, is less subject to interjudge variations than phrases, classes and themes, and has been evaluated as an appropriate unit in previous research." Sentences overcome the problems of allocation of portions of pages and remove the need to account for, or standardize, the number of words (Hackston and Milne, 1995, p. 13). Furthermore, sentences are a more natural unit of written English to count than words (Hughes and Anderson, 1995, p. 17). In reference to contrasting sentences to pages, Walden and Schwartz (1997, p. 150) considered "a sentence to be a conventional unit of speech and writing, but the portion of the page measurement as not." For the purposes of this study the preferred unit of analysis was sentences.[23]

### Measurement of Independent Variables

In order to complete the analysis on the effects of the independent and control variables, measures of each were applied as follows:

1. Uncertainty avoidance (Uncer) is measured using the original cultural scores derived by Hofstede (1980) for the seven study nations;
2. Masculinity (Mas), like uncertainty avoidance, is represented for each country using the scores calculated by Hofstede (1980);
3. Political and civil system (PCS) is ascertained using the overall index scores based on the work of Gastil (1978) issued by Freedom House (1995);[24]
4. Legal system (Legal) is represented by a binary code based on the work of Salter and Doupnik (1992)[25] with 1 = common law and 0 = Roman–Germanic law;
5. Level of economic development (LED) is measured on a dichotomous scale based upon classifications provided in World Development Report summaries from the World Bank with 1 = Developed and 0 = Undeveloped;

6. Size of the equity market (EMS) is determined as the average total capitalization of the market over 1995 as a percentage of the GDP for the given nation;
7. Turnover of the equity market (EMT) is represented as the annual average trading volume of the nation's stock exchange as a percentage of the market's total capitalization;
8. Organizational size (Size) is measured by the natural log of the firm's market capitalization;
9. Economic performance (ROA) is represented by the 5-year average of accounting based return on assets;[26] and
10. Industry type (IT) classifications are based on the International Standard Industrial Classification of All Economic Activities (ISIC-1968) as reported by the International Labor Office (1993).[27]

## Statistical Tests

To examine the influence of country of origin to determine whether there is any significant variation in the quantity of VESAD (QV) between the seven countries involved in this study, two multiple regression models based on Equation (1) are tested:[28]

$$QV = a_1 + \alpha_1 \mathrm{Size} + \alpha_2 \mathrm{ROA} + \alpha_3 \mathrm{IT1} + \alpha_4 \mathrm{IT2} + \alpha_5 \mathrm{IT3} + \gamma_1 \mathrm{C1} + \gamma_2 \mathrm{C2} + \gamma_3 \mathrm{C3} + \gamma_4 \mathrm{C4} + \gamma_5 \mathrm{C5} + \gamma_6 \mathrm{C6} + \varepsilon \tag{1}$$

where:

Size = natural log of market capitalization of the firm;
ROA = 5-year average of accounting based return on assets;
IT1 = resource industry;
IT2 = manufacturing industry;
IT3 = finance industry;
C1 = 1 for an Australian entity and 0 otherwise;
C2 = 1 for a Singaporean entity and 0 otherwise;
C3 = 1 for a Hong Kong entity and 0 otherwise;
C4 = 1 for a Philippine entity and 0 otherwise;
C5 = 1 for a Thai entity and 0 otherwise; and
C6 = 1 for an Indonesian entity and 0 otherwise.

The first regression model excluded all the control variables. These factors are then included in the second test model. Malaysia is not represented by a dummy variable in either model and therefore acts as the intercept factor for the comparison with the average QV for the remaining six nations. If any of the coefficients on the dummy variables for each nation is significant in the first model, it can then be concluded that the quantity of VESAD in the corresponding nation differs significantly from the intercept country. Such a result will imply that variations in VESAD practices were significantly affected by nation-level factors.

Multiple regression analysis is then further utilized to test two regression models, i.e., Equations. (2) and (3), to test $H_1$–$H_7$.[29]

$$QV = a_1 + \alpha_1 Size + \alpha_2 ROA + \alpha_3 IT1 + \alpha_4 IT2 + \alpha_5 IT3 - \beta_1 Uncer - \beta_2 Mas - \beta_3 PCS + \beta_4 Legal + \beta_5 LED + \beta_6 EMS + \beta_7 EMT + \varepsilon \quad (2)$$

$$QV = a_1 - \beta_1 Uncer - \beta_2 Mas - \beta_3 PCS + \beta_4 Legal + \beta_5 LED + \beta_6 EMS + \beta_7 EMT + \varepsilon \quad (3)$$

where:

Size = natural log of market capitalization of the firm;
ROA = 5-year average of accounting based return on assets;
IT1 = resource industry;
IT2 = manufacturing industry;
IT3 = finance industry;
Uncer = uncertainty avoidance;
Mas = masculinity;
PCS = political and civil system;
Legal = legal system;
LED = level of economic development;
EMS = market size of the equity market;
EMT = market turnover of the equity market.

The objective of the multiple regression models based on Equation (2) is to determine the significance of the independent variables with consideration for any intervening effects of the control variables. Equation (3) ignores the influence of any control variables in order to determine the explanatory power of the independent variables within the model.

## DATA ANALYSIS

Table 1 provides descriptive statistics, by nation, for response rates and the amount of VESAD information.

Table 2 presents regression results for Equation (1). Panel A shows significant differences in the average amount of disclosure provided by companies from the even nations. Specifically, the average QV for Malaysian firms was significantly less than for organizations in Singapore, the Philippines and Thailand. Average QV in Malaysia is not significantly different from that in Australia, Hong Kong and Indonesia.

Findings from the second multiple regression models based on Equation (1) (see Panel B) support the findings in Panel A. The variation in VESAD practices, however, cannot be fully determined by the control variables.[30] Coefficients for Size (organizational size), IT3 (Finance Sector) and C5 (Thailand) were found to be statistically significant at the 5% confidence level. C1 (Australia) and C4 (the Philippines) were also found to be significant at the 10% confidence level.[31]

Table 3 summarizes results of the final two regression models in this study. Both were found to be highly significant ( $p < 0.001$). The adjusted coefficient of determination was

**Table 2.** Multiple Regression Results for Tests of Country of Origin Effects

*Panel A — Multiple Regression Results for Equation (1) Excluding Control Variables*
$QV=a_1+\gamma_1C1+\gamma_2C2+\gamma_3C3+\gamma_4C4+\gamma_5C5+\gamma_6C6+\varepsilon$

| *Name of variable* | *Intercept* | *C1* | *C2* | *C3* | *C4* | *C5* | *C6* |
|---|---|---|---|---|---|---|---|
| Value of coefficient | −8.907 | 5.587 | 14.554 | −2.403 | 9.028 | 17.475 | −0.755 |
| *t*-Value | −3.046 | 1.526 | 2.582 | −0.456 | 2.010 | 2.666 | −0.127 |
| Significance of *t*-value | 0.002 | 0.128 | **0.026*** | 0.649 | **0.045*** | **0.008*** | 0.899 |
| Adjusted $R^2$ = 0.216 ***F*-statistic** = 3.302 $p$ = 0.000 | | | | | | | |

*Panel B — Multiple Regression Results for Equation (1) Including Control Variables*
$QV=a_1+\alpha_1Size+\alpha_2ROA+\alpha_3IT1+\alpha_4IT2+\alpha_5IT3+\gamma_1C1+\gamma_2C2+\gamma_3C3+\gamma_4C4+\gamma_5C5+\gamma_6C6+\varepsilon$

| *Name of variable* | *Intercept* | *Size* | *ROA* | *IT1* | *IT2* | *IT3* | *C1* | *C2* | *C3* | *C4* | *C5* | *C6* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Value of coefficient | −8.658 | 4.880 | 0.000 | 4.936 | −2.061 | −6.741 | 4.874 | 6.574 | −2.201 | 6.245 | 11.581 | 3.301 |
| *t*-Value | −6.835 | 7.906 | 1.029 | 1.414 | −0.727 | −2.242 | 1.385 | 1.927 | −0.560 | 1.816 | 2.508 | 0.753 |
| Significance of *t*-value | 0.000 | **0.000*** | 0.304 | 0.158 | 0.468 | **0.000*** | 0.167 | **0.055**** | 0.576 | **0.070**** | **0.013*** | 0.452 |
| Adjusted $R^2$ = 0.370 ***F*-statistic** = 18.372 $p$ = 0.000 | | | | | | | | | | | | |

*Significant at 5% confidence level.

**Significant at 10% confidence level.

QV = quantity of VESAD; Size = natural log of market capitalization of the firm; ROA = 5-year average of accounting based return on assets; IT1 = resource industry; IT2 = manufacturing industry; IT3 = finance industry; C1 = 1 for an Australian entity and 0 otherwise; C2 = 1 for a Singaporean entity and 0 otherwise; C3 = 1 for a Hong Kong entity and 0 otherwise; C4 = 1 for a Philippine entity and 0 otherwise; C5 = 1 for a Thai entity and 0 otherwise; and C6 = 1 for an Indonesian entity and 0 otherwise.

**Table 3.** Results of Regression Analysis of Independent Variables

| Panel A — Equation (2) $QV=a_1+\alpha_1 Size+\alpha_2 ROA+\alpha_3 IT1+\alpha_4 IT2+\alpha_5 IT3-\beta_1 Uncer-\beta_2 Mas-\beta_3 PCS+\beta_4 Legal+\beta_5 LED+\beta_6 EMS+\beta_7 EMT+\varepsilon$ | | | | Panel B — Equation (3) $QV=a_1-\beta_1 Uncer-\beta_2 Mas-\beta_3 PCS+\beta_4 Legal+\beta_5 LED+\beta_6 EMS+\beta_7 EMT+\varepsilon$ | | | |
|---|---|---|---|---|---|---|---|
| *Name of independent variable* | *Coefficient value* | *t-Value* | *Significance of t-value* | *Name of independent variable* | *Coefficient value* | *t-Value* | *Significance of t-value* |
| Int. | 4.678 | 0.223 | 0.824 | Int. | −0.018 | −0.41 | 0.686 |
| Size | 4.757 | 7.657 | **0.000*** | Size | N/A | N/A | N/A |
| ROA | 2.019 | 0.974 | 0.331 | ROA | N/A | N/A | N/A |
| IT1 | 4.282 | 1.239 | 0.216 | IT1 | N/A | N/A | N/A |
| IT2 | −1.866 | −0.665 | 0.507 | IT2 | N/A | N/A | N/A |
| IT3 | 6.197 | 1.780 | **0.076**** | IT3 | N/A | N/A | N/A |
| Uncer | −0.321 | −2.486 | **0.013*** | Uncer | −0.325 | −2.520 | **0.012*** |
| Mas | −0.165 | −2.211 | **0.028*** | Mas | −0.155 | −2.067 | **0.039*** |
| PCS | −1.746 | −1.717 | **0.087**** | PCS | −1.931 | −1.792 | **0.074**** |
| Legal | 0.671 | 0.303 | 0.762 | Legal | 0.334 | 0.153 | 0.879 |
| LED | 0.002 | 0.658 | 0.511 | LED | 0.008 | 0.374 | 0.708 |
| EMS | 25.57 | 0.953 | 0.341 | EMS | 21.67 | 0.930 | 0.353 |
| EMT | 4.100 | 0.189 | 0.850 | EMT | 6.359 | 0.292 | 0.770 |
| Adjusted $R^2 = 0.358$ | | | | Adjusted $R^2 = 0.216$ | | | |
| $F$-statistic $= 29.311$ | | | | $F$-statistic $= 13.335$ | | | |
| $p = 0.000$ | | | | $p = 0.000$ | | | |

*Significant at 5% confidence level ($p < 0.05$).
**Significant at 10% confidence level ($p < 0.10$).
QV = quantity of VESAD; Size = natural log of market capitalization of the firm; ROA = five-year average of accounting based return on assets; IT1 = resource industry; IT2 = manufacturing industry; IT3 = finance industry; Uncer = uncertainty avoidance; Mas = masculinity; PCS = political and civil system; Legal = legal system; LED = level of economic development; EMS = market size of the equity market; and EMT = market turnover of the equity market.

0.358 for Equation (2) (see Table 3, Panel A) and 0.216 for Equation (3) (see Table 3, Panel B). Results in Panel A indicate that the coefficients for organizational size (Size) and Finance Sector (IT3) were statistically significant, similar to Equation (1).

Uncer (uncertainty avoidance), Mas (masculinity) and PCS (political and civil system) were significant in both Equations (2) and (3). The remaining four societal variables (legal system, level of economic development, size, and turnover of the equity market) were insignificant in these two regression models. For all coefficients found to be statistically significant (at either $p < 0.05$ or $p < 0.10$), the directional signs were as predicted.

## DISCUSSION OF RESULTS

A principal objective of this study was to investigate possible variations in the quantity of VESAD supplied in the annual reports of companies operating in the Asia-Pacific region. Findings for multiple regression models based on Equation (1) indicated that the average amount of VESAD details supplied in the annual reports of companies in the seven study nations varied significantly across national boundaries. Additional parametric *t*-tests[32] indicated that organizations in Singapore, Thailand and the Philippines appeared to supply higher amounts of disclosure than their counter-parts in Hong Kong, Indonesia and Malaysia. Australian-based firms appear to provide VESAD amounts between these two groupings. Results from the multivariate analysis of Equation (1) indicate that the variation in VESAD practices cannot be fully explained by the control variables and that intercountry factors are of potential influence.

Empirical evidence from the multivariate analysis based on Equations (2) and (3) shows that uncertainty avoidance, masculinity, and the political and civil system are all statistically related to the dependent variable and explain part of the variation between companies operating in different nations in the Asia-Pacific region. These results provide support for the acceptance of $H_1$–$H_3$ (Table 4). Findings for these societal variables are consistent with prior theoretical and empirical studies relating disclosure practices to cultural factors (see, e.g., Gray, 1988; Eddie, 1996a,b) and the political and civil system (see Belkaoui, 1985; Goodrich, 1986).

The significance of both cultural variables also provides support for the theoretical framework developed by Gray (1988) but extends the model to include environmental and social accounting disclosures. Findings in this study suggest that firms operating in social environments influenced by a high level of uncertainty avoidance will be reluctant to voluntarily disclose environmental and social information. This reluctance may in part be due to a fear that disclosures could jeopardize the financial security of the firm. Jaggi and Zhao (1996) pointed out that managers in Hong Kong provided little environmental information (a subset of VESAD) for fear it would give rise to liabilities and pollution controls. These views are consistent with the Bourgeois political economy perspective (see Guthrie and Parker, 1990). Findings related to masculinity imply that enterprises within a social environment characterized by feminine attributes and perspectives voluntarily provide greater amounts of environmental and social accounting information. This result supports the Bourgeois political economy view that organizations are responding to social expectations where the impact of a firm's activities on society are of central importance.

**Table 4.** Summary of Tested Hypotheses

| *Hypothesis* | *Hypothesis description* | *Predicted sign on regression coefficient* | *Actual sign on regression coefficient* | | *Statistical significance of coefficient* | | *Accept/ reject* |
|---|---|---|---|---|---|---|---|
| | | | *Equation (2)* | *Equation (3)* | *Equation (2)* | *Equation (3)* | |
| $H_1$ | There is a negative association between the level of uncertainty avoidance and extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region. | Negative | Negative | Negative | Significant | Significant | Accept |
| $H_2$ | There is a negative association between the level of masculinity and extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region. | Negative | Negative | Negative | Significant | Significant | Accept |
| $H_3$ | There is a negative association between the level of political and civil repression and the extent of VESAD information presented in the annual reports of listed companies in the Asia-Pacific region. | Negative | Negative | Negative | Significant | Significant | Accept |
| $H_4$ | There is a positive association between the Roman–Germanic legal system and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region. | Positive | Positive | Positive | Not significant | Not significant | Reject |
| $H_5$ | There is a positive association between the level of economic development and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region. | Positive | Positive | Positive | Not significant | Not significant | Reject |
| $H_6$ | There is a positive association between the size of the equity market and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region. | Positive | Positive | Positive | Not significant | Not significant | Reject |
| $H_7$ | There is a positive association between the turnover of the equity market and the extent of VESAD information presented in annual reports of listed companies in the Asia-Pacific region. | Positive | Positive | Positive | Not significant | Not significant | Reject |

Based on the statistical findings from multivariate tests (Equations (2) and (3)), $H_4$ and $H_5$ are rejected. The rejection of any influence of the legal system is inconsistent with the theoretical framework and empirical findings of Doupnik and Salter (1995). However, their research focused largely on corporate financial disclosures rather than environmental and social accounting issues. Likewise, a lack of significant findings related to the level of economic development contradicts the theoretical predictions of Cooke and Wallace (1990) and related empirical research by Salter (1998). It is important to note, however, that the empirical work of Salter (1998) also focused on financial rather than environmental and social accounting disclosures. Evidence from this study implies that within the Asia-Pacific region the theoretical models developed by Doupnik and Salter (1995) and Cooke and Wallace (1990) may have limited applicability.

Rejection of $H_6$ and $H_7$ contradicts theoretical expectations formed from the extant literature. The lack of association between the size of the equity market and quantity of disclosure also opposes past empirical research. Conversely, findings for the turnover of the equity market were consistent with prior empirical findings (Ahmed, 1995; Doupnik and Salter, 1995). The lack of influence of equity market related factors is also inconsistent with prior research that has concluded that VESAD is of relevance to investors (Ingram, 1978; Anderson and Frankle, 1980; Freedman and Stagliano, 1992). Much of the past research related to the influence of the equity market and importance of VESAD to investors has been based on United States data. Findings from this study show that in the Asia-Pacific region management may not consider environmental and social accounting disclosures to be of importance to suppliers of finance, such as investors, when making investment decisions and, therefore, do not feel any pressure to supply these details.

Finally, findings in this study related to organizational size and industry type indicate that across the Asia-Pacific region these two factors also significantly influence the amount of VESAD provided by companies. Results for these two factors are, therefore, consistent with findings from prior empirical research (Cowan et al., 1987; Belkaoui and Karpik, 1989; Patten, 1991; AlNajjar, 1995). The third control variable, economic performance, is not statistically significant. As noted above, previous empirical findings concerning this variable are mixed. Results from this study, although indicating no association between economic performance and the quantity of VESAD among companies in the Asia-Pacific region, may best be interpreted in the light of past research. That is, implying the influence of economic performance is weak and inconsistent, rather than having no impact at all.

## CONCLUDING REMARKS AND FUTURE RESEARCH

Research presented in this paper focuses on an empirical analysis of the effects of socio-political and economic factors on VESAD practices in seven nations across the Asia-Pacific. A sample of 356 companies operating in seven Asia-Pacific nations was surveyed to measure the quantity of VESAD information disclosed in annual reports. Statistical tests indicated that across the seven nations the quantity of VESAD information varied significantly. Results of multivariate analysis showed that culture and the political and civil systems were significant explanatory variables. Conversely, economic related factors — that is level of economic development and equity market — were not significant.

Findings from this study suggest that organizations provide VESAD details as a method of protecting their self-interests in the face of social and political pressures. A lack of statistical significance of factors based on economic and financial characteristics (e.g. economic performance, level of development, and the equity market) supports Patten's (1991, 1992) view that VESAD information was released in response to social rather than economic pressures. Finally, overall findings of this study support the application of a Bourgeois political economic framework for examining and explaining variations in VESAD practices. As noted by Gray et al. (1995a), VESAD research has struggled for a consensus on an applicable theoretical framework. Results from this study provide additional support for the suitable development of a theoretical perspective based on a political economy model as suggested by Gray et al. (1996).

As with most research, this study has some limitations. Companies surveyed in this project were from one region. A logical extension to this paper would be to examine the VESAD practices of organizations in other regions of the world and empirically test the independent variables against data collected from those sources. Results from this study did not fully explain all the variation in quantity of VESAD practices in the Asia-Pacific region. Further research can be conducted in the Asia-Pacific region to determine the impact of other variables such as the influence of specific figureheads (e.g., the King of Thailand) or religious doctrines. VESAD is a complex phenomenon and this project only examines one aspect — that of the amount and determinants of disclosure. Results and conclusions from this study can be further improved by examining issues such as the quality of disclosures. Finally, a longitudinal study may be implemented to determine whether there are any significant shifts in the amount of VESAD practices in accordance with changes in the independent variables used in this study.

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## APPENDIX A. CATEGORIES AND DECISION RULES FOR ENVIRONMENTAL AND SOCIAL ACCOUNTING DISCLOSURE BY CORPORATIONS

### A.1. Category One — Environment

#### *A.1.1. General Environmental Considerations*

Statement of the corporation's business operations on environmental pollution pertaining to

- noise
- air

- water
- visual quality

Statement of the capital, operating, and research and development expenditures and activities of the environmental pollution produced by the firm with respect to

- noise
- air
- water
- visual quality

## A.1.2. Environmental Policy

Actual statement of policy
Statements of formal intentions
Statements indicating that company will undertake certain measure to curb environmental pollution and other such damage or what the company does

### *A.1.3. Environmental Audit*

Reference to environmental review, scoping, audit, assessment including independent attestation

### *A.1.4. Environmental — Product and Process-Related*

Waste(s)
Packaging
Recycling
Products and product development
Land contamination and mediation

### *A.1.5. Environmental Financially Related Data*

Reference to financial/economic impact
Investment and investment appraisal
Discussion of areas with financial/economic impact
Discussion of environmental–economic interaction

### *A.1.6. Sustainability*

Any mention of sustainability
Any mention of sustainable development

#### *A.1.7. Environmental Aesthetics*

Designing facilities harmonious with the environment
Contributions in terms of cash or art/sculptures to beautify the environment
Restoring of historical buildings and structures
Landscaping

#### *A.1.8. Environmental — Other*

Involvement in schemes
Undertaking environmental impact studies to monitor the company's impact on the environment
Receiving awards related to programs or policies of company
Protection of the environment
Environmental education
Note: All classifications are undertaken with care so as to ensure that the disclosure is not part of the business (e.g., waste disposal or environmental technology)

### A.2. Category Two — Energy

Conservation of energy in the conduct of business operations
Using energy more efficiently during the manufacturing process
Utilizing waste materials for energy production
Disclosing energy savings resulting from product recycling
Discussing the company's efforts to reduce energy consumption
Disclosing increased energy efficiency of products
Research aimed at improving energy efficiency of products
Receiving an award for an energy conservation program
Voicing the company's concern about the energy shortage
Disclosing the company's energy policies
Note: Care in classifying is taken if it is part of the business (e.g., oil exploration companies)

### A.3. Category Three — Human Resources

#### *A.3.1. Health and Safety*

Reduction and/or elimination of pollutants, irritants or hazards in the work environment
Promotion of employee safety and physical or mental health
Disclosure of accident statistics
Compliance with health and safety standards and regulations
Receiving a health and safety award
Establishment of a safety department/committee/policy

Conducting research to improve work safety
Information/education/training of employees on safety and health related matters
Reference to health and safety law and/or inspectorate

*A.3.2. Employment of Minorities or Women*

Recruiting or employing racial minorities and/or women
Disclosing the percentage or number of minority and/or women employees in the workforce and/or in the various managerial levels
Establishing goals for minority representation in the workplace
Programs for the advancement of minorities in the workplace
Employment of other special interest groups
Disclosures about internal advancement statistics
Proposals, plans or initiated actions for equal opportunity, racial equality and sexual equality

*A.3.3. Employee Assistance/Benefits*

Provision for the assistance or guidance of employees who are in the process of retiring or redundancy
Provision for low health care services
Provision for staff accommodation/housing ownership schemes
Provision for recreational activities/facilities

*A.3.4. Employee Profiles*

Indication of the number of employees in the company and/or at each branch/subsidiary
Relevant statistics on the staff such as length of service and age
Providing the occupations/managerial levels involved
Providing the geographical disposition of staff
Information detailing the experience and qualifications of staff recruited

*A.3.5. Employee Morale and Relations*

Detailing information on the management's relationships with subordinates in an effort to improve job satisfaction and employee motivation
Providing information on the stability of workers' jobs and the company future
Information on the availability of a separate employee report
Details of awards for effective communication with employees
Supply of information about the communication of details to employees on management styles and management programs that may directly affect the employees

### *A.3.6. Industrial Relations*

Reporting on the company's relationship with trade unions and/or workers
Information on strikes, industrial actions/activities and the resultant losses in terms of time and productivity
Information on how industrial action was reduced/negotiated

### *A.3.7. Employee — Other*

General improvements in the working conditions
Information on the restructuring of any element of the organization/branches that affect the staff in any way
Closure of any element of the organization with resultant redundancies and/or relocation/retraining schemes undertaken by the firm to retain staff
Information and statistics on staff turnover
Details about support for day-care, maternity and paternity leave

## A.4. Category Four — Products and Customers

### *A.4.1. Product Development*

Information on developments related to the company's products including its packaging
Information on any research projects established by the organization to improve its products in any way

### *A.4.2. Product Safety*

Disclosing that products meet applicable safety standards
Details on schemes to make products safer
Conduction of research on safety of firm's products
Disclosure of improvements or more sanitary procedures in the processing and preparation of products
Information related to the safety of firm's products purchased

### *A.4.3. Product — Other*

Information on the quality of the firm's product as reflected in prizes/awards received
Verifiable information that the quality of the firm's product has increased

### *A.4.4. Consumer Information*

Disclosing of customer safety practices
Customer complaints

Specific consumer relations (over and beyond "our duty to the consumer")
Provision for disabled, aged, etc. customers
Provision for difficult-to-reach customers

## A.5. Category Five — Community Involvement

Donations of cash, products or employee services to support established non-government based community activities, events, organizations, education and the arts
Summer or part-time employment of students or disabled
Sponsoring public health, sporting or recreational projects
Aiding medical research
Sponsoring educational conferences, seminars or art exhibits
Funding scholarship programs or activities
Supporting national pride/government-sponsored campaigns
Supporting the development of local industries or community programs and activities.

## NOTES

1. VESAD has been defined in a number of different ways (Gray et al., 1995a; Mathews, 1997). For this paper, VESAD is defined as that information voluntarily provided by organizations related to their activities, programs and application of resources deemed to affect the public. These disclosures extend beyond traditional financial accounting, encompassing details related to employees, products and consumers, community services and environmental impact, prevention and reduction. For the purposes of this study, environmental and social accounting disclosure deemed only to be voluntary were measured. Accounting regulations and other relevant literature (such as Corporation Laws and stock exchange listing requirements) were reviewed in each nation to eliminate any mandatory disclosures from the analysis. Generally, environmental and social accounting disclosures were voluntary across all nations with very few mandatory disclosures noted. It is important to note that when the limited mandatory disclosures were included, results of empirical tests did not differ from those provided in this paper. An example of a mandatory disclosure, was the amount of money donated by an entity to specified charitable organizations. This requirement applied only in Hong Kong.
2. Past research has used a number of interchangeable synonyms to describe environmental and social accounting practices (Guthrie and Parker, 1989); these include 'corporate social disclosure', 'corporate social accounting', 'social accounting', 'corporate social responsibility' and 'social responsibility disclosure'. The author does not consider the differences in nomenclature to be significant. Environmental and social accounting disclosure is used in reference to recent trends to describe these phenomena in this manner (see, e.g., Mathews, 1997).
3. For the purposes of this paper, political economy theory was defined as "the interplay of power, the goals of power wielders and the productive exchange system. As a framework, political economy does not concentrate exclusively on market exchanges. Rather it, first of all, analyzes exchanges in whatever institutional framework they occur and, second,

analyzes the relationships between social institutions such as government law and property rights, each fortified by power and the economy, that is the system of producing and exchanging goods and services (Jackson, 1982, p. 74)."

4. Bourgeois political economy was mainly developed from the works of J.S. Mill and his students. Neoclassical and radical political economy theory are two other leading forms of the modern liberalism perspective. I considered neoclassical political economy theory to be inappropriate due to flaws in the perceived relationship between the nation of VESAD and the conceptual underlying assumptions of neoclassical theory (e.g., perfectly competitive markets). For a further review, see Gray et al. (1988, 1996). Radical political economy theory based largely on Marxist theory was not applied as it is more applicable to mandatory issues and offers few insights into voluntary disclosures (see, e.g., Gray et al., 1995a).
5. The following provides an illustration of how VESAD may be used to protect self-interests. Consider an organization that has failed in the past to satisfactorily meet pollution control requirements. The firm faces interference from the following two sources: (1) society may become disenchanted with the company and withdraw support; or (2) the government may introduce more stringent guidelines and requirements. Either one of these events could jeopardize the survival of the enterprise. In response to these perceived threats, the organization could disclose information informing the public and government of action undertaken by the firm — alterations in policy or procedures introduced — which will enable the company to meet present requirements in the future. The basic strategy of releasing this information is to restore society's confidence in the entity, build a positive image and deflect government concerns and attention. This example is not intended to be universal. It is but one of a number of different examples that could be used to describe how VESAD information can be used as an effective method of preserving the self-interests of a firm in the face of social and political pressures. For further examples, refer to Lindbolm (1994).
6. The remaining two dimensions defined by Hofstede (1980) were: (1) large versus low power distance; and (2) individualism versus collectivism. A further dimension, long-term versus short-term orientation, based on work by Bond (1987), was later added (see Hofstede, 1992).
7. Secrecy and transparency was defined by Gray (1988, p. 8) as "a preference for confidentiality and the restriction of disclosure of information about the business only to those who are closely involved with its management and financing as opposed to a more transparent, open and public accountable approach." He hypothesized that "the higher a country ranks in terms of uncertainty avoidance and power distance and the lower it ranks in terms of individualism and masculinity then the more likely it is to rank highly in terms of secrecy (Gray, 1988, p. 11)."
8. For the purposes of this study, costs and benefits are not simply limited to the financial amounts derived in producing information. Costs and benefits may be highly intangible items difficult to measure but perceived to be highly relevant by management to continued success of the entity.
9. Gastil (1990) defines political rights as the ability of individuals, organizations and other related bodies to play a part in determining laws and the government of the community. This concept captures such things as political competitiveness, freedom to organize multiple political parties, the right of political opposition and self-determination by major sub-groups (Lin, 1993).
10. Civil liberties envisions the rights of the individual against the state and the rights of freedom of expression and a fair trial. This definition encompasses such things

as the freedom of assembly and demonstration and freedom of speech and religion (Lin, 1993).

11. Given that the former Soviet Union and its various satellites are not included within the scope of the current research study, discussion of Socialist law is not considered further.
12. Barrett's study concluded that the quantity of corporate disclosure (as measured by an index) in the United Kingdom and the United States was much higher than that in Sweden, the Netherlands, Germany, France and Japan.
13. An important point to note is that these studies examined voluntary, not mandatory, disclosures. These studies therefore provide specific evidence to suggest that voluntary environmental and social accounting disclosures are of relevance to investors.
14. As of 31st December 1994, there were 3050 publicly listed entities in the seven study nations: Australia (1215), Singapore (213), Hong Kong (508), Philippines (124), Thailand (361), Indonesia (198) and Malaysia (431).
15. Only 65 companies were selected from the Philippines representing all companies that had their major headquarters listed in that nation.
16. A 100% response rate was not obtained because some companies did not respond despite two reminder letters or they had no further stock of 1995 annual reports. Additional searches for annual reports from non-respondents proved largely unsuitable due to the lack of adequate databases and other relevant library storage facilities in several nations (e.g., the Philippines, Thailand and Indonesia).
17. Each reviewer was a senior academic in Communication studies holding a doctorate in English Literature or Mass Communication.
18. E.g., the original checklist provided too much ambiguity between the meanings of what constituted an environmental consideration and environmental policy.
19. For instance, in Hong Kong, there is a mandatory disclosure requirement related to certain charitable donations that must appear in the directors' reports. Clearer distinction was made in the checklist instrument to ensure that any disclosures related to donations that were required to be disclosed were excluded from the analysis.
20. Each independent reviewer and the author reviewed two annual reports from each nation. Seven annual reports (one from each nation) were considered during both phases of pretesting.
21. E.g., during the first phase, difficulty was found to exist in identifying the nature of some educational programs offered by several companies as being designed for human resource purposes or community development. The checklist was adjusted to clarify these disparities.
22. Mandatory environmental and social accounting disclosures in the seven Asia-Pacific study nations are virtually non-existent. Indonesia, for example, requires only three mandatory environmental and social disclosures to be made, requirements that only apply to a limited number of organizations in specific industries (specifically mining). Mandatory requirements in the other six nations numbered less than five, with the aptitude of each requirement having a limited impact on the number of organizations and industries.
23. Although sentences were the preferred unit of analysis, the number of words and pages were also examined. Statistical tests did not find any significant difference in the results reported in this paper when sentences were used.
24. The political and civil system index developed by Gastil (1978) was based on two indices: (1) political rights, and (2) civil liberties. The scores applied in this study are the combined scores derived from adding the scores for each index related to each respective nation. Lin

(1993) argued that this procedure was more representative of the political and civil system in each nation.

25. Salter and Doupnik (1992) did not originally classify Indonesia. A review of the foundations of the legal system in Indonesia indicated many principles of Roman-Germanic law largely associated with influences of former Dutch colonialism.
26. Measuring this ratio over an extended period provides a more reliable measure of corporate performance than a single year measure (Hackston and Milne, 1995). Where data were unavailable for the full 5-year period, an average was calculated based on the number of years obtainable.
27. Organizations were originally classified into the 10 categories of the ISIC. Due to uneven distribution across the respective categories, firms were redistributed into four classes. These were: Resource Sector (containing firms based on ISIC groupings 1, 2, 4 and 5); Manufacturing Sector (ISIC grouping 3); Finance Sector (ISIC grouping 8); and Services Sector (ISIC groupings 6, 7, 9 and 0). These four categories were subsequently called IT1, IT2, IT3 and IT4, respectively.
28. Non-parametric tests were also conducted. Results using a Wilcoxian rank sum test were identical to those of the parametric *t*-tests. Therefore, only results for the parametric *t*-tests are shown in the main text of the paper.
29. Parametric *t*-tests were also conducted to examine the influence of the legal system and level of economic development on the dependent variable.
30. One-away ANOVA results provided further support for the findings from parametric *t*-tests that significant differences in the average quantity of VESAD disclosure varied significantly between companies operating in the seven nations surveyed (*F*-statistic = 5.631; significance of *F*-statistic = 0.000).
31. Sensitivity analysis was conducted to identify any possible bias of the control variables toward any one nation. This analysis was conducted by performing separate regressions for each nation using only the control variables. Results for each nation were similar with organizational size and industry type being statistical by significant. Economic performance was not significant in any of the tests.
32. Results from the additional parametric *t*-tests were not included in the paper as they did not provide any details not otherwise covered by the findings in Table 2. Results of the parametric *t*-tests can be obtained from the author on request.

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# An Empirical Investigation of Multinational Firms' Compliance with International Accounting Standards

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**Key Words:** International Accounting Standards; Cross-border trade; Harmonization; Voluntary disclosure

***Abstract:*** *Over the years, the number of firms acknowledging adherence to International Accounting Standards (IAS) in the presentation of their financial statements has increased steadily. Since adherence to IAS is not mandatory, the questions are who are these firms, what are their characteristics, and why are they voluntarily complying with IAS. This study examines the underlying motivations and characteristics of firms complying with IAS. This examination is of special interest to the International Accounting Standards Committee (IASC) for assessing the merits of mandating IAS by multinational firms. It also helps accounting researchers in understanding the disclosure behavior of multinationals. Our results indicate that the magnitude of a firm's foreign operations, its financing policy, membership of certain geographical and trade blocks in the European Union (EU), and multiple listing on foreign stock exchanges are significantly associated with multinationals' compliance with IAS.*

This paper examines the characteristics of multinational firms complying with International Accounting Standards (IAS). IAS are not mandatory, yet many multinational firms are voluntarily complying with the standards. The findings of this study should not only enhance our understanding of why firms are motivated to adhere to IAS, but also provides us with the merits of mandating IAS instead of allowing discretionary adoption by firms.

The economic forces of international trade and finance made evident a need to overcome the obstacles created by widely divergent systems of financial reporting and their nationalistic antecedents. Expanding firm activities into foreign markets increases the number of users of its financial statements and disclosures. Users in foreign (host) countries prefer financial statements and disclosures that are comparable to locally prepared statements in terms of accounting standards and scope of disclosure. Financial statements prepared in accordance with local GAAP might have to: (i) be restated in

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accordance with host country GAAP, as is the case in the United States;[1] (ii) provide for a reconciliation between host country and the local country GAAP; or (iii) adopt a set of accounting rules that are universally acceptable, such as IAS. For example, when Daimler Benz of Germany wanted to obtain equity financing and have their shares traded on the New York Stock Exchange (NYSE), they had to comply with the listing requirements of the Securities and Exchange Commission (SEC), which require compliance with United States GAAP.

In the absence of a universally acceptable set of accounting standards and disclosures, a firm wishing to list its securities on multiple stock exchanges would conceivably produce multiple financial statements to comply with the securities laws and host country GAAP of each respective country in which its shares wished to be listed. This could be a very costly process to the firm and confusing to the financial markets, and may lead to a sub-optimal resource allocation for both the firm and local markets.

To overcome this and similar type of problems of dealing in an international environment, the accountancy bodies of nine countries founded and formed the International Accounting Standards Committee (IASC) in 1973. The IASC formulates and publishes in the public interest accounting standards to be observed in the presentation of financial statements and to promote their worldwide acceptance and observance. While not empowered with any enforcement provisions, the members agreed to support the standards and use their best efforts to ensure that published financial statements comply with the standards. They further agree to persuade governments, stock exchanges, and other bodies to support the IASC's standards.

In 1987, a global body of securities regulatory agencies and security exchanges formed the International Organization of Securities Commissions and Similar Organizations (IOSCO) to, among other things, cooperate toward ensuring better regulation of security markets, and establish standards and an effective surveillance of international security transactions. In this regard, they joined the IASC consultative group and agreed that they would enforce compliance with international accounting standards if the number of allowable options included in acceptable IAS standards were reduced and other standards were strengthened.[2]

The IOSCO has promulgated a list of core accounting issues that must be included in IAS in order for IOSCO to endorse the pronouncements for use by issuers in cross-border financing. A "work plan" has been devised by the IASC with scheduled completion of all projects by 1999. The conclusion of this collaboration could result in statements prepared in accordance with IAS being acceptable for most foreign stock exchanges, thereby eliminating the current need to produce multiple financial statements to comply with each country's individualistic requirements (Nottle, 1993). Not only will this eventually reduce the cost and confusion associated with different reporting requirements, it will likely increase substantially the amount of cross-border financing and stock exchange listings.

The efforts of the institutions mentioned above would hopefully result in a uniform solution to the problem in the long run. Meanwhile, multinational firms are currently coping with the problem on a cost-benefits basis. As economies become more and more inter-dependent, compliance with IAS, as a solution, seems to be growing and, thus, warrants investigation since IAS are not mandatory. Understanding the characteristics and

motivations of this subset of multinationals would help in assessing the potential outcome of mandating IAS for multinational firms.

The results of this study help provide some insight into why firms have voluntarily elected to adopt IAS. It would appear that firms voluntarily complying with IAS are those wishing to obtain exposure to new markets, obtaining foreign debt and equity capital, improving customer recognition, or looking to reduce political costs. Their motivation seems to be driven by a demand for financial information that is prepared in accordance with a more universally recognized set of accounting standards than those prepared in accordance with local accounting standards. In an efficient global market, if the inherent reliability and timeliness of accounting information is questionable, investors and creditors will impose higher costs of financing on companies providing misinformation. Mandatory compliance with IAS could lead to more cost effective and efficient markets through reduced costs of compliance and analysis. It would also enhance cross border financing and trade as well as provide a means to better understand foreign firm credit worthiness.

## DETERMINANTS OF MULTINATIONAL FIRMS' COMPLIANCE WITH IAS

Although cross-border financing and listing on foreign stock exchanges are significant reasons for some firms to voluntarily adopt IAS, they are not the only reasons. We hypothesize that firms are motivated to comply with IAS as a response to their ope-rating and financing environment. This environment includes among other things: (i) international market dependency; and (ii) regional or geographical organization membership.[3]

### International Market Dependency

Multinational firms compete for international resources such as customers for their products, capital for growth and expansion, and materials and technology. Prior research (e.g., Zarzeski, 1996) argues and concludes that firms competing for foreign resources tend to expand their financial and accounting disclosure as bonding for resource providers. This expanded disclosure is assumed to reduce resource providers' uncertainty about transactions with the firm and, in turn, enable the firm to obtain resources at lower costs. Verrecchia (1983), in an analytical description of capital markets, shows that traders are unable to interpret withheld information of a firm as good or bad, in comparison to the firm's competitors. Indeed, traders are likely to discount the value of the firm, thereby encouraging more transparent disclosure practices.

Compliance with IAS is a form of expanded disclosure aimed at satisfying the needs of the foreign user of the firm's financial statements. Financial disclosures prepared in compliance with IAS can facilitate comparison across firms of different nationalities as well as being indicative of more reliability. Therefore, compliance with IAS reduces the risks to international users of financial statements. Moreover, reducing the uncertainty of resource providers through compliance with IAS makes the firm more attractive to resource providers and, therefore, helps the firm in obtaining international resources at reasonable costs.

### *Distribution Markets*

Firms that derive a significant part of their revenues (or manufacturing operations) from foreign markets tend to develop international policies with respect to investing, marketing, financing, and disclosure. To serve their trading partners in multiple foreign markets while minimizing service costs, multinational firms may find adherence to IAS a more appro-priate disclosure policy that may help reduce chances for misunderstanding and misinter-pretations, thereby strengthening confidence (Wyatt, 1997). In addition, there have been suggestions that indirect benefits accrue from foreign stock listings that include increasing publicity about the firm and a reduction of possible political costs (Gray and Roberts, 1994). For example, increased publicity that results from foreign listing might change per-ceptions that a firm is more serious about its commitment to a country thereby encouraging sales to customers who cherish the stability of local and long-term relationships.

**$H_1$:** Firms with higher percentage of total revenue derived from foreign sales (FS) are more motivated to adhere to IAS in their financial statements. This implies a positive correlation between the percentage of FS and the likelihood of a firm's adherence to IAS.

### *Access to Foreign Capital Markets*

Multinational firms invest in different foreign countries. Parallel to their multinational investment policy, is the tendency to raise capital from different foreign markets. Raising capital from foreign markets helps multinational firms in two areas: (i) raising capital at lower costs; and (ii) achieving hedges against fluctuations in foreign currencies. However, capital suppliers in host countries generally demand more reliable and comparable financial information to assess the foreign investee's worthiness. In fact, many stock exchanges require foreign firms wishing to list their securities to conform financial statements to local accounting principles and financial disclosure or to comply with IAS. Faced with additional risks and uncertainties in procuring competitive resources, it is likely that multinational enterprises adhere to IAS to satisfy foreign capital market information needs.

In this study, we use two measures of multinational firms' desire to access foreign capital markets: the number of firm foreign stock exchanges that the firm is listed on and the debt to equity ratio (DE). We anticipate that firms with listings on multiple foreign stock exchanges are more motivated to adhere to IAS as a common disclosure requirement to satisfy the information needs of multiple foreign capital-suppliers.

**$H_2$:** Firms with listings on multiple foreign stock exchanges are more motivated to adhere to IAS. This suggests a positive correlation between the number of foreign stock exchanges (EX) a firm is listed on and its likelihood of adherence to IAS.

Prior research suggests that capital structure of multinational companies is dependent on both local and international economic forces (Sekely and Collins, 1988). For instance, Zarzeski (1996) argues that companies with high debt ratios tend to share more private information with their creditors because of well developed banking relationships and interlocking corporate ownerships. In contrast, companies with low levels of debt financing tend to depend heavily on equity financing, which could encourage investor demand for information. Since adherence to IAS can be considered as a form of expanded disclosure, we hypothesize the following:

**$H_3$:** Firms with lower debt ratios tend to adhere to IAS. This suggests a negative correlation between debt financing and adherence to IAS.

### Geographical and Trade Blocks Membership

Recently, the European Union (EU) has decided to investigate the use of IAS for consolidated financial statements of members seeking cross-border financing and listings rather than develop these standards through its Directive process. In addition, some countries (i.e., Italy) have adopted IAS in cases where their own accounting standards are silent. Therefore, we anticipate that firms in countries that are members of EU are more likely to comply with IAS.

**$H_4$:** Firms of EU countries (EU) are more likely to adhere to IAS. This suggests a positive correlation between EU membership and adherence to IAS.

## RESEARCH DESIGN

### Sample and Data

We relied on two sources for identifying the sample and obtaining the data for tests: (i) the IASC Secretariat, who provided their list of "Companies Disclosing that Their Financial Statements Conform with International Accounting Standards"; and (ii) the Worldscope[4] database for obtaining the variables of interest in this study. The IASC Secretariat's list revealed 221 firms as complying with IAS. This sample was then screened against the Worldscope database for data availability. Of the original 221 firms, only 153 were found on the Worldscope database. Of these, only 87 firms had sufficient information of the above-mentioned variables to be included in the experimental sample. For inferential purposes, a control sample of 87 matched firms were selected from non-IASC conforming firms appearing in the Worldscope database. Matching was done on the basis of a firm's similar market capitalization and similar two digit SIC code to the firms identified in the experimental sample.

Data was collected for each variable of each experimental and control firm for the most recent three years as reported in the Worldscope database. Three years of data rather than 1 year were selected to be more representative of a firm's longitudinal characteristics

and to eschew inferences that might occur from any unusual or abnormal data of a single year.

### *Model*

Two statistical procedures are used: (i) the non-parametric Wilcoxon test is used to analyze the characteristics of IAS firms in comparison to those of non-IAS firms; and (ii) the Logit regression model to test the relationship between a firm's compliance with IAS and the hypothesized explanatory variables. Under the Logit model, the odds of a firm's compliance with IAS is described by the conditional ratio of: $P(G_j/X_j)/(1-P(G_j/X_j))$, where $P(G_j/X_j)$ is the probability of being a member of $G$ given $X_j$. The log–linear function of this probability can be expressed as follows (see Mensah, 1984; Maddala, 1991):

$$\mathrm{Log}(P_j/1 - P_j) = A_0 + A_1(\mathrm{Log}\,X_{j1}) + \ldots + A_K(\mathrm{Log}\,X_{jk}),$$

where:

$P_j$=probability of firm $j$ adherence to IAS,
$X_{jk}$=the explanatory variables of firm $j$.

The empirical variables used in this model are defined as follows:

$P_j$=the compliance status of firm $j$ to IAS, and it takes one if firm $j$ adhered to IAS and zero, otherwise;
$X1$=the percentage of foreign sales to total sales of firm $j$ ($\mathrm{FS}_j$);
$X2$=the number of foreign stock exchanges where firm $j$ is listed ($\mathrm{EX}_j$);
$X3$=the debt to equity ratio of firm $j$ ($\mathrm{DE}_j$);
$X4$=a dummy variable representing membership in the European Union ($\mathrm{EU}_j$). $\mathrm{EU}_j$ takes one if the firm belongs to EU and zero, otherwise;
$A_0$ and $A_k$=the intercept and coefficients estimates, respectively.

In order to assure that the results of Logit regression were not affected by outlying observations, a regression by ranks is also performed.

## ANALYSIS OF RESULTS

### Summary Statistics

Table 1 presents summary statistics about the characteristics for both the experimental and control samples. Table 1 reveals that the experimental sample (firms complying with IAS) has higher FS, lower DE, higher percentage of firms belonging to the EU, and is listed on more exchanges (EX). Table 1 also shows that the experimental sample has lower return on equity (ROE). At first glance, the comparative direction of ROE seems contrary to expectations. However, this variable reflects both underlying economic phenomenon

**Table 1.** Summary Statistics of Variables

| *Variable* | *Mean* | *Standard deviation* | *Minimum* | *Maximum* |
|---|---|---|---|---|
| IAS Firms | | | | |
| LTA | 14.6543 | 1.6874 | 10.6439 | 19.1766 |
| ROE | 11.8082 | 11.7352 | 0.0100 | 68.0700 |
| DE | 1.0902 | 1.2769 | 0.0100 | 9.9529 |
| FS | 49.9838 | 30.1053 | 0.0000 | 97.9300 |
| EX | 2.4201 | 1.1272 | 1.0000 | 4.0000 |
| EU | 0.4138 | 0.4954 | 0.0000 | 1.0000 |
| Non-IAS Firms | | | | |
| LTA | 14.2167 | 1.7433 | 9.7457 | 17.8846 |
| ROE | 17.7863 | 18.2727 | 0.0100 | 105.6600 |
| DE | 1.5152 | 2.9687 | 0.0200 | 14.0000 |
| FS | 28.0512 | 26.0855 | 0.0000 | 93.1000 |
| EX | 2.0690 | 1.2556 | 1.0000 | 4.0000 |
| EU | 0.2069 | 0.4074 | 0.0000 | 1.0000 |

LTA = Log of Total Assets; ROE = Return on Equity; DE = Debt to Equity Ratio; FS = Foreign Sales to Total Sales; EX = Number of Stock Exchanges Listed; EU = Percentage of Sample Firms Members of European Union.

and differences in accounting practices. For example, complying firms have, on average, lower debt financing, which suggests lower financial risk and thus, ceteris paribus, lower cost of equity capital. In addition, compliance with IAS might produce more conservative measures of earnings, since uniformity embedded in IAS practices reduces managerial discretion in income measurement.

It should be noted that some of the variables have outlying observations as evidenced by the values in the minimum and maximum columns of Table 1. To minimize the effect of these outliers on the regression results, a regression on ranks technique (Cheng et al., 1992) is also employed.

## Nonparametric Wilcoxon Tests

Table 2 presents the Wilcoxon non-parametric tests of differences between the two samples, IAS firms and non-IAS firms. The results confirm that IAS firms are statistically different from the non-IAS firms in terms of FS, belonging to the EU, multiple exchange listings (EX), the ROE, and debt financing (DE). While FS, membership of EU, and ROE are significant at the 0.01 level or less, exchange listings, DE, and total assets are still significant at 0.028, 0.10, and 0.08 level, respectively.

These results are consistent with our expectations. That is, IAS sample have more foreign markets, are listed on more exchanges, and have more firms belonging to EU. The results also suggest that complying firms employ more equity financing, relative to non-IAS firms.

**Table 2.** Wilcoxon Non-Parametric Test Results of the Comparison Between IAS-Firms and Non-IAS Firms

| *Variable* | *Mean (IAS Firms)* | *Mean (Non- IAS Firms)* | *Z-Statistic* | *Probability > Z* |
|---|---|---|---|---|
| LTA | 14.65 | 14.22 | 1.71 | 0.080 |
| ROE | 11.81% | 17.79% | 2.67 | 0.007 |
| DE | 1.09 | 1.52 | 1.63 | 0.100 |
| FS | 49.9% | 28.1% | 4.82 | 0.000 |
| EX | 2.43 | 2.07 | 2.20 | 0.028 |
| EU | 0.41 | 0.21 | 2.94 | 0.003 |

LTA = Log of Total Assets; ROE = Return on Equity; DE = Debt to Equity Ratio; FS = Foreign Sales to Total Sales; EX = Number of Stock Exchanges Listed; EU = Percentage of Sample Firms Members of European Union.

**Table 3.** Logistic Results of the Relationship Between Firms' Compliance with IAS and the Hypothesized Variables: $Y_j = A_0 + A_1(DE_j) + A_2(FS_j) + A_3(EX_j) + A_4(EU_j) + e_j$

| *Variable* | *Parameter estimate* | *Wald Chi-Square* | *P > Chi-square* |
|---|---|---|---|
| Intercept | −0.349 | 0.038 | 0.844 |
| DE | −0.147 | 2.508 | 0.056 |
| FS | 0.029 | 16.487 | 0.000 |
| EX | 0.382 | 3.861 | 0.025 |
| EU | 0.887 | 4.178 | 0.020 |

Concordant = 80.3%. DE = Debt to Equity Ratio; FS = Foreign Sales to Total Sales; EX = Number of Stock Exchanges Listed; EU = Percentage of Sample Firms Members of European Union.

### Regression Results

Table 3 presents the results of the Logistic procedure. The overall model indicates a concordance of 80.3%. All of the hypothesized independent variables are significant and their parameters are in the predicted direction. The most significant variable is FS, percent of foreign sales. Other significant variables include DE, number of foreign stock exchange listings (EX), and membership in the EU. These results support the hypotheses previously set forth.

To investigate whether the results from the Logistic procedure were influenced by extreme values of the variables, we performed an OLS regression on ranks. The results of this regression support those of the Logistic procedure.[5]

## CONCLUSIONS AND RECOMMENDATIONS

This paper provides an analysis of why some international firms voluntarily comply with IAS. A number of hypotheses were introduced, including the desire to access foreign capital markets, the scope of international operations, and membership of some world or regional unions or business treaties. The results support these hypotheses indicating that firms are motivated to voluntarily adopt IAS in order to enhance their exposure to foreign markets, to improve customer recognition, to secure foreign capital, and reduce political costs of doing business abroad.

As more firms voluntarily adopt IAS it will become self-evident that the market will place significant value on the adoption of a universally accepted set of accounting standards and thereby decrease the uncertainty previously associated with attempts to universalize accounting standards. The benefits derived from following universally accepted IAS would include a reduction in the costs associated with financial analysis and disclosure thereby resulting in more efficient capital markets. This, in turn, would enhance cross border financing and trade.

Some have argued that total accounting harmonization is difficult since accounting practices appear to be culture-driven. However, the results of this empirical study are significant because they suggest that firms operating in the international markets are more likely to voluntary disclose higher levels of investor-oriented information. Indeed, the evidence in this paper suggests that firms' accounting disclosure policies are influenced by the harmonizing and encompassing effects of world culture and market forces. Further, international dependency may force firms to be so transparent in their reporting requirements that institutionalized harmonization of accounting principles/practices for multinational firms may be totally unnecessary if one believes that accounting principles and practices can be harmonized on their own by the "invisible hand" of free market forces. Compliance with IASC Standards is strictly voluntary. Nevertheless, support for the IASC and its Standards is increasingly apparent around the world. Indeed, the accounting profession may not be too far away from a set of acceptable "world class" accounting principles. Further analysis is required to impound more demographic, cultural and environmental factors.

## NOTES

1. The reconciliation requirement has been cited as a major factor for discouraging foreign firms to offer securities in the US market (Cochrane, 1992).
2. Opponents of IAS have argued that adoption of IAS will hurt investors because of their perceived lowering of standards when compared to many host countries' standards. Harris (1995), however, shows that reconciliation between revised IAS and US GAAP was quite small.
3. Other environmental factors have been analyzed in Adhikari and Tondkar (1992).
4. Worldscope is a database of information on over 10,000 international corporations published by Disclosure.
5. In the OLS regression on ranks, FS is positive and significant at the 0.00 level, indicating that the higher the firm's percentage of FS, the more likely the firm will comply with IAS. Exchange listing (EX) is also positive and significant at the 0.03 level, supporting the hypothesis that compliance with IAS is positively correlated with multiple exchange listings. Similar conclusion can be made for EU membership.

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# Do Firms Use Industry-Wide Targets When Managing Earnings? Finnish Evidence

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**Key Words:** Earnings management; Financial ratios; Ratio adjustment process; Industry analysis; Nonlinear models; Finland

***Abstract:*** *This study investigates the adjustment process of the earnings management of a firm to industry-wide targets in Finland, where accounting and tax legislation provide extensive possibilities for firms to manage their earnings. In addition, the amount of earnings management is directly measurable from published financial statements of the Finnish firms. The results of the study indicate that the management of a firm takes into account the extent of earnings management of other firms operating in the same industry when managing reported earnings. Furthermore, firms seem to consider mainly the permanent part of the change in the industry average when determining the target level of earnings management.*

There is a considerable body of literature suggesting that firms manage, or smooth, their earnings over time (see, e.g., Imhoff, 1977; Michelson et al., 1995; Booth et al., 1996). Earnings management is aimed to soften the impact of hard times on earnings and, conversely, to diminish the contemporaneous effect of good times on earnings. There are various practical implications of earnings management. To illustrate, Healy (1985) investigates the impact of management compensation schemes on earnings management, DeAngelo et al. (1994) investigate the impact of financial distress on earnings management, and Michelson et al. (1995) as well as Booth et al. (1996) investigate how earnings management affects stock price behavior. Interestingly, earnings management is found to be an international phenomenon that appears in different accounting systems (see, e.g., Moses, 1987; Ashari, 1994; Kasanen et al., 1996; Saudagaran and Sepe, 1996).

The purpose of this study is to investigate whether firms manage earnings to industry-wide averages. Most of the previous studies investigating earnings management assume that the earnings management actions are aimed at adjusting earnings towards some firm-specific target level.[1] However, it can be assumed that the level of earnings management of a certain firm is also related to level of earnings management of other firms operating in

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the same industry. This is because investors compare the economic conditions of firms within the industry. If the extent of earnings management differs considerably from the industry-wide average, investors and other stakeholders may regard it as a signal of the future success of the firm. In other words, the amount of earnings management of a firm cannot be expected to deviate too much from the industry-wide average in the long run. Although the phenomenon has received considerable attention in financial ratio analysis, none of the earlier studies investigates this issue in the context of earnings management.

Our paper contributes to the existing literature in two main respects. First, this paper extends the existing earnings management literature by investigating the existence of industry-wide targets in the adjustment process of earnings management. Several studies show that financial ratios adjust to industry-wide averages, but the evidence on industry averages as targets in the adjustment process of earnings management is sparse. Second, while most of the studies investigating the earnings management of a firm use US or UK data, this paper provides international evidence by using Finnish data. Since Finnish accounting rules give appreciable discretion to determine earnings, Finland provides an interesting arena for investigating the earnings management behavior of firms. In addition, the level of earnings management of the Finnish firms can be directly measured from published financial statements, because the Finnish firms have to report the amount of discretionary accruals in their financial statements. Hence, much of the difficulties in the measurement of earnings management documented in the previous studies can be avoided when the Finnish data are used (see, e.g., Kasanen et al., 1996).

The remainder of this paper is organized as follows. Earnings management in Finland and the models of the ratio adjustment process are described in the section Earnings Management and Ratio Adjustment Processes. The section Research Design describes the data and methods used in the study. Empirical results are provided in the section Empirical Results of the Adjustment of Earnings Management. Finally, the section Conclusions concludes the paper.

## EARNINGS MANAGEMENT AND RATIO ADJUSTMENT PROCESSES

### Earnings Management in Finland

In Finland, financial reporting is closely tied to taxation. As noted by Kasanen et al. (1996), among others, Finnish firms have a strong incentive to manage earnings to save taxes and pay constant dividends to large institutional owners. The Business Tax Act gives Finnish firms ample discretion to determine annual taxable earnings. Finnish financial reporting is, therefore, often criticized for providing tax minimization rather than economic reality statements. The main difference between the Finnish financial statements and the International Accounting Standards (IAS) recommendations is related to depreciation. According to the Business Tax Act, the maximum depreciation rate for machinery is 30% and that for buildings is 5–20% depending on the material used in the construction. Firms can determine reported earnings by selecting any depreciation level between zero and the maximum depreciation rate defined in the Business Tax Act.

Finnish firms can also create untaxed reserves for future losses and expenditures. Untaxed reserves include inventory, bad debt, operational, warranty and investment

**Table 1.** Adjusted Finnish Income Statement According to the Corporate Committee for Financial Analysis

| |
|---|
| Net sales (SAL) |
| Materials and supplies |
| Wages and salaries |
| Personnel costs |
| Change in pension fund liabilities |
| Rents |
| Other costs and expenses |
| Production for own use |
| Change in inventories |
| Operating income (OPE) |
| Financial expenses |
| Financial income |
| Taxes |
| Other expenses |
| Other income |
| Income after financial income and expenses (FIN) |
| Depreciations according to plan |
| Net income (NET) |
| Extraordinary expenses |
| Extraordinary income |
| Adjusted income (ADJ) |
| Depreciation in excess of plan |
| Changes in reserves |
| Change in pension fund liabilities |
| Net income (REP) |

reserves. To illustrate the importance of reserves as a means of earnings management, firms can transfer extra inventory expenses in addition to the costs of goods sold to income statement by forming an inventory reserve. The maximum acceptable inventory reserve is 35% of inventories.

Because of the extensive opportunities of Finnish firms to manage earnings, Finnish financial analysts adjust reported earnings to better describe the economic reality of a firm. Most notably, adjusted earnings are calculated by using so-called depreciation according to plan. Even though the Finnish firms can use any depreciation level between zero and the maximum depreciation rate when determining reported earnings, they have to report depreciation according to plan based on the management's evaluation of the life of an asset. Straight-line depreciation is the most common approach. Other important adjustments include changes in reserves and changes in pension fund liabilities.

Table 1 shows the adjusted income statement of the Finnish firms. This stylized income statement is based on recommendations of the Corporate Committee for Financial Analysis (Yritystutkimusneuvottelukunta, 1993), and it is used in the database used in

this study. Operating income (OPE) is calculated by taking into account the change in pension fund liabilities, because Finnish firms do not have to record pension liabilities contributed to pension foundations on an accrual basis. Net income (NET) is calculated by using depreciation according to plan. The difference between the reported (REP) and adjusted income (ADJ) is the result of changes in pension fund liabilities, changes in reserves and the difference between 'tax' depreciation and 'economic' depreciation. The difference between REP and ADJ is a direct measure of earnings management adapted by the Finnish firms. It reflects the discretionary accruals used by firms to influence reported earnings. To illustrate, a firm can report depreciation in excess of plan to manage reported earnings downward. Consequently, it can report smaller depreciation than planned to manage earnings upward.

## Models of Ratio Adjustment Process

The adjustment process of financial ratios has received substantial attention in the previous literature (see, e.g., Frecka and Lee, 1983; Lee and Wu, 1988; Davis and Peles, 1993). Alternative theoretical models are developed under the assumption that financial ratios converge to predetermined target levels such as industry averages. Empirical evidence has supported the proposed financial ratio adjustment models. In this study, the adjustment process of earnings management is investigated by using the financial ratio adjustment models successfully used in previous studies. In his seminal study, Lev (1969) proposed the following adjustment process for financial ratios:

$$y_t - y_{t-1} = \beta_0 + \lambda(y_t^* - y_{t-1}) + \varepsilon_t, \tag{1}$$

where $y_t$ is a firm's financial ratio in period $t$, $\beta_0$ is the intercept term, $y_t$* is the target level of a financial ratio, $\lambda$ is the speed of adjustment coefficient, and $\varepsilon_t$ is the error term.

In this model, the current level of a financial ratio is assumed to move gradually from the previous level to the target level. The target level is assumed to be equal to the past industry-wide average. The speed of adjustment coefficient measures how quickly the financial ratio adjusts to the target level. It should have values between 0 and 1.

Empirically, Lev's ratio adjustment model can be estimated in the following form:

$$y_t = \beta_0 + \beta_1 x_{t-1} + \beta_2 y_{t-1} + \varepsilon_t, \tag{2}$$

where $y_t$ is a firm's financial ratio in period $t$, $\beta_0$ is the intercept term, $\beta_1$ and $\beta_2$ are the estimated slope coefficients (note that $\beta_1 = \lambda$ and $\beta_2 = 1 - \lambda$), $x_{t-1}$ is the level of industry mean in period $t-1$, $y_{t-1}$ is a firm's financial ratio in period $t-1$, and $\varepsilon_t$ is the error term.

The model of Lev (1969) assumes that the past industry average is an appropriate proxy for the long-term target financial ratio. However, part of the change in industry average may be transitory and, consequently, the firm does not necessarily adjust its financial ratio to the same extent. Lee and Wu (1988) suggest a generalized ratio adjustment model that controls the effect of the manager's assessment regarding the persistency of change in the industry-wide average of the financial ratio. They assume that the target level of a financial

ratio is an exponentially weighted average of the past industry averages. The Lee and Wu's model is a nonlinear model described as follows:

$$y_t = \alpha_0 + \lambda\delta x_{t-1} + (2 - \lambda - \delta)y_{t-1} - (1 - \lambda)(1 - \delta)y_{t-2} + u_t, \tag{3}$$

where $y_t$ is a firm's financial ratio in period $t$, $\alpha_0$ is the intercept term, $\lambda$ is the speed of adjustment coefficient, $\delta$ is the proportion of the change in industry average which is assumed to be permanent, $x_{t-1}$ is the level of industry mean in period $t-1$, $y_{t-1}$ is a firm's financial ratio in period $t-1$, $y_{t-2}$ is a firm's financial ratio in period $t-2$, and $u_t$ is the error term.

Similar to Lev's model, the speed of adjustment coefficient, $\lambda$, measures how quickly a financial ratio adjusts to the target level, and its estimated value should be between zero and one. An estimate of $\delta$ describes to what extent the management of a firm assumes that the change in industry average is permanent by nature. A high value of $\delta$ indicates that a substantial part of change in the industry average is assumed to be permanent and, consequently, the expected target ratio is adjusted instantaneously to the current level of industry average (see Lee and Wu, 1988).

## RESEARCH DESIGN

### Data

Accounting earnings are retrieved from the database maintained by ETLA (Research Institute of the Finnish Economy). The sample consists of all Finnish listed firms during the period from 1988 to 1996. Industry groups are formed according to the official industry classification of Helsinki Exchanges. Industry classification and the number of observations used in the regressions for each industry are described in Appendix A. The sample period is characterized by an exceptionally strong economic boom in the late 1980s and recession in the early 1990s. To illustrate, about 35% of the earnings among listed Finnish firms were negative in 1991–1993 (see, e.g., Kallunki et al., in press). The sample period provides an interesting environment for the investigation of earnings management, because the Finnish firms had an exceptional need to use the ample discretion when determining reported earnings in order to smooth their income stream.

The level of earnings management is measured as a difference of reported and adjusted earnings in year $t$. Levels are deflated by total assets and sales from year $t-1$. Thus, the following empirical measures of the earnings management are used when estimating the ratio adjustment models:

$$\text{Earnings management/Total assets} = (\text{REP}_{it} - \text{ADJ}_{it})/\text{Total Assets}_{it-1}, \tag{4}$$

$$\text{Earnings management/Sales} = (\text{REP}_{it} - \text{ADJ}_{it})/\text{Sales}_{it-1}, \tag{5}$$

where $\text{REP}_{it}$ and $\text{ADJ}_{it}$ are reported and adjusted earnings of the $i$th firm in year $t$, respectively.

**Table 2.** Means and Standard Deviation Values of Different Earnings Measures in Mill. FIM

| | *Adjusted earnings* | | | *Reported earnings* | | |
|---|---|---|---|---|---|---|
| *Year* | *Mean* | *(Probability)* | *Standard deviation* | *Mean* | *(Probability)* | *Standard deviation* |
| 1988 | 361 | (0.000) | 496 | 132 | (0.002) | 260 |
| 1989 | 204 | (0.000) | 333 | 31 | (0.060) | 117 |
| 1990 | 99 | (0.029) | 338 | 63 | (0.009) | 176 |
| 1991 | −110 | (0.014) | 342 | −37 | (0.181) | 217 |
| 1992 | −158 | (0.010) | 454 | −45 | (0.225) | 282 |
| 1993 | −39 | (0.371) | 340 | 78 | (0.019) | 255 |
| 1994 | 245 | (0.002) | 587 | 208 | (0.004) | 535 |
| 1995 | 310 | (0.000) | 636 | 36 | (0.000) | 430 |
| 1996 | 249 | (0.000) | 491 | 241 | (0.001) | 505 |

Probability values refer to a $t$-test with a null hypothesis that the earnings measure equals zero.

Table 2 presents summary statistics for adjusted and reported earnings. Higher time-series volatility of adjusted earnings as compared to reported earnings can readily be seen from the table. Adjusted earnings are always greater than reported earnings in terms of absolute values. This indicates that the Finnish firms manage their reported earnings downwards during good times and upwards during hard times. By this behavior, they can reduce taxes during the boom period. Mean numbers in Table 2 also show the significant slump that Finnish firms experienced in 1991–1993, mainly because of the collapse of the Soviet Union, Finland's most important trading partner in the late 1980s.

## Methods

The ratio adjustment model (Equations 1–2) of Lev (1969) and the generalized ratio adjustment model (Equation 3) of Lee and Wu (1988) are used to investigate the adjustment process of earnings management. Lev's model is applied by estimating the following pooled OLS regression:

$$y_{it} = \beta_0 + \beta_1 x_{it-1} + \beta_2 y_{it-1} + \varepsilon_{it}, \tag{6}$$

where $y_{it}$ is the measure of the earnings management of the $i$th firm in period $t$ (see Equations 4 and 5), $\beta_0$ is the intercept term, $\beta_1$ and $\beta_2$ are the estimated slope coefficients, $x_{it-1}$ is the industry average of earnings management in period $t-1$, $y_{it-1}$ is the earnings management in period $t-1$, and $\varepsilon_{it}$ is the error term with zero mean and constant variance. Earnings management is measured as described in Equations (4) and (5).

Lee and Wu's model is first applied in linear form in order to get preliminary evidence on the performance of the model before we turn to the estimation of its nonlinear form. Lee and Wu's model can be extended from the Lev's model by adding a firm's financial ratio in period $t-2$ ($y_{it-2}$) as an additional independent variable. Thus, the following pooled OLS regression is estimated

$$y_{it} = \alpha_0 + \alpha_1 x_{it-1} + \alpha_2 y_{it-1} + \alpha_3 y_{it-2} + u_{it}, \tag{7}$$

where $y_{it}$ is the measure of the earnings management of the $i$th firm in period $t$ (see Equations 4 and 5), $\alpha_0$ is the intercept term, $\alpha_1$, $\alpha_2$ and $\alpha_3$ are the estimated slope coefficients, $x_{it-1}$ is the industry average of earnings management in period $t-1$, $y_{it-1}$ is the earnings management in period $t-1$, $y_{it-2}$ is the earnings management in period $t-2$ and $u_{it}$ is the error term with zero mean and constant variance.

Since the Lee and Wu's model is nonlinear by nature, the main conclusions are based on the estimation of the following nonlinear regression model:

$$y_{it} = \alpha_0 + \lambda\delta x_{it-1} + (2 - \lambda - \delta)y_{it-1} - (1 - \lambda)(1 - \delta)y_{it-2} + u_{it}, \tag{8}$$

where $\lambda$ is the speed of adjustment coefficient and $\delta$ is the proportion of the change in industry average which is assumed to be permanent.

The use of industry-wide averages as targets for the firms' earnings management implicitly assumes that the variability of the industry averages varies across industries. For this reason, the time-series standard deviations of the industry averages of earnings management measures are calculated and compared as a preliminary data analysis. For the earnings management deflated by total assets, the standard deviations of the industry averages vary from 0.016 (food industry) to 0.042 (other industries). For the earnings management deflated by sales, standard deviations vary from 0.016 (food industry) to 0.077 (energy). The values of $X^2$-statistics for testing the difference in the standard deviations of industry averages is 37.287 ($p<0.001$) for earnings management deflated by sales and 19.847 ($p<0.050$) for earnings management deflated by total assets, respectively. Thus, these results indicate that the variability of the industry averages is significantly different in different industries.

Ratio adjustment models are usually estimated for individual firms in time-series regressions and the conclusions are based on the distributions of the firm-specific estimates of regression parameters. However, the time-series of earnings available in ETLA's database is relatively short and, therefore, the number of observations would be too small to be used in time-series regressions. For this reason, the pooled data are used in the study. The use of pooled data in regressions may involve problems if there is cross-sectional dependency between firms.

To investigate the effect of pooling, all the regression models are first estimated in panels by using the one-way error component regression model. The $F$-test is used in order to determine if there exist fixed effects in the models, i.e., cross-sectional dependency across firms. The results indicate that the null hypothesis of no cross-sectional dependency is not rejected in any of the models. When earnings management deflated by total assets is used as a dependent variable, the values of $F$-statistics for testing the significance of the fixed effects in models (6) and (7) are 0.503 ($p=0.993$) and 0.906 ($p=0.627$), respectively. When earnings management deflated by sales is a dependent variable, the values of $F$-statistics in models (6) and (7) are 0.572 ($p=0.978$) and 0.949 ($p=0.557$), respectively. The heteroskedasticity of the regression models is investigated using the test of White (1980). The test revealed that all the estimated models are homoskedastic ($p>0.10$). In addition, models (6) and (7) were estimated in a log-linear form to control the potential problem of heteroskedasticity. The results of using the log-linear model specifications were similar to those reported in the tables.

**Table 3.** Results of Estimating Lev's Adjustment Model

| *Dependent variable* | $\beta_0$ *(probability)* | $\beta_1$ *(probability)* | $\beta_2$ *(probability)* | *F* *(probability)* | $R^2$ |
|---|---|---|---|---|---|
| Earnings management/ total assets | 0.000 (0.802) | 0.464 (0.000) | 0.062 (0.282) | 45.66 (0.000) | 0.15 |
| Earnings management/ sales | 0.000 (0.939) | 0.491 (0.000) | 0.048 (0.397) | 56.501 (0.000) | 0.18 |

*Note:* The estimated model is described in Equation (6). Earnings management is measured as a difference between reported and adjusted annual earnings.

**Table 4.** Results of Estimating Lee and Wu's Generalized Adjustment Model. Linear Model Specification

| *Dependent variable* | $\alpha_0$ *(probability)* | $\alpha_1$ *(probability)* | $\alpha_2$ *(probability)* | $\alpha_3$ *(probability)* | *F* *(probability)* | $R^2$ |
|---|---|---|---|---|---|---|
| Earnings management/ total assets | −0.003 (0.049) | 0.321 (0.000) | 0.110 (0.009) | −0.090 (0.003) | 31.656 (0.000) | 0.17 |
| Earnings management/ sales | −0.004 (0.027) | 0.352 (0.000) | 0.120 (0.011) | −0.084 (0.011) | 34.947 (0.000) | 0.19 |

*Note:* The estimated model is described in Equation (7). Earnings management is measured as a difference between reported and adjusted annual earnings.

## EMPIRICAL RESULTS OF THE ADJUSTMENT OF EARNINGS MANAGEMENT

The results of estimating the ratio adjustment model of Lev (1969) described in Equation (6) are reported in Table 3. The magnitude of earnings management of a firm is regressed on the lagged industry average of earnings management and on the lagged value of earnings management of a firm. The level of earnings management is scaled both by total assets and sales. The slope coefficient of the lagged industry average ($\beta_1$) is an estimate of the speed of adjustment coefficient, $\lambda$. The results indicate that the speed of adjustment coefficients are significant and fall in the theoretical range. They are also relatively high as compared, for instance, to those reported by Ho et al. (1997). This suggests that the magnitude of earnings management is strongly related to that of the firms operating in the same industry. Earnings management implemented by the firm cannot deviate too much from the amount of earnings management that is typical for the other firms in the same industry. The intercept terms and slope coefficients of lagged earnings management variable are not significantly different from zero.

In order to compare alternative adjustment models, the generalized adjustment models of Lee and Wu (1988) in Equations (7) and (8) are estimated next. The results of estimating the Lee and Wu's model in linear form are given in Table 4. The speed of adjustment coefficient ($\alpha_1 = \lambda$) is again highly significant and within the theoretical range. The slope coefficients of the lagged-one earnings management variable of a firm are also significant. The lagged-one variable was not significant in the Lev's model in Table 3 suggesting that Lee and Wu's model is better in explaining the dynamics of earnings management adjustment process as compared to the Lev's model. Similar to the

**Table 5.** Results of Estimating Lee and Wu's Generalized Adjustment Model. Nonlinear Model Specification

| *Dependent variable* | $\alpha_0$ *(probability)* | $\lambda$ *(probability)* | $\delta$ *(probability)* | $R^2$ |
|---|---|---|---|---|
| Earnings management/ total assets | −0.007 (0.000) | 0.726 (0.000) | 1.169 (0.000) | −0.25 |
| Earnings management/ sales | −0.008 (0.000) | 0.723 (0.000) | 1.165 (0.000) | −0.14 |

*Note:* The estimated model is described in Equation (8). Earnings management is measured as a difference between reported and adjusted annual earnings.

results of Lee and Wu (1988), the slope coefficient of the lagged-two variable is significantly negative.

Table 5 reports the results of estimating the Lee and Wu's model in nonlinear form according to Equation (8). The estimates of the speed of adjustment coefficients, $\lambda$, are significant and they fall in the theoretical range. They are also relatively large in magnitude. This indicates that the managers of the firm take into account the amount of earnings management of other firms in the same industry when they manage the reported earnings of their firm. These findings are consistent with the results of using the Lev's model in Table 3. The estimates of the change in industry average assumed to be permanent by managers, i.e., $\delta$, are also significant and relatively large in magnitude.[2] This indicates that managers consider mainly the permanent part of the change in industry average when determining the target level of earnings management. The explanatory power of the models, $R^2$, is negative. This can occur for nonlinear models denoting that the models do not encompass the dependent mean as a special case.

## CONCLUSIONS

The issue of earnings management has been discussed in the accounting literature for several decades from various perspectives including management compensation schemes, financial distress and stock price behavior. Usually, it is explicitly or implicitly presumed that accounting earnings are managed towards a firm-specific target. In general, Finnish firms tend to manage reported earnings close to zero to save taxes in the long run. This study investigates whether the extent of earnings management adjusts to an industry-wide target level. It is hypothesized that the extent of earnings management of a firm cannot deviate too much from that of the other firms operating in the same industry. For instance, a firm cannot manage reported earnings consistently upward year after year, because stakeholders may take this behavior as a signal of troubles in the business operations of the firm.

The earnings management of Finnish firms is of interest in this study, because the Finnish legislation provides extensive discretion for firms to manage their reported earnings. Moreover, the extent of earnings management can be directly measured from the published Finnish income statements. Frequently used financial ratio adjustment models of Lev (1969) and Lee and Wu (1988) are applied to investigate the adjustment

process of the extent of earnings management. The results indicate that the extent of earnings management adjusts to industry-wide averages. The estimated speed of the adjustment coefficient is highly significant and relatively high. The results of the adaptive adjustment model of Lee and Wu (1988) indicate that the management of a firm considers mainly the permanent part of the change in industry-wide averages when setting the target of earnings management.

## APPENDIX A

### Industry Classification Used in the Study

| *Industry* | *No. of observations* |
|---|---|
| Transport | 41 |
| Trade | 59 |
| Other services | 9 |
| Metal and engineering | 95 |
| Forest industry | 33 |
| Multi-business | 54 |
| Energy | 6 |
| Food industry | 50 |
| Construction | 28 |
| Telecommunications and electronics | 18 |
| Chemicals | 36 |
| Media and publishing | 27 |
| Other industry | 53 |
| Total | 509 |

## NOTES

1. In the case of a troubled firm, for instance, managers have an incentive to manage earnings upwards to avoid juridical processes that lead to bankruptcy. Finnish firms have traditionally managed earnings downwards to minimize taxes (see, e.g., Kasanen et al., 1996).
2. Estimates of $\delta$ are slightly above their theoretical range. Similar results are also reported by Lee and Wu (1988), who find that about 20–30% of firms in their sample have the estimated $\delta$ above the theoretical range.

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The International Journal of Accounting

# An Analysis of the Authorship of International Accounting Research in U.S. Journals and *AOS*: 1980 through 1996

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**Key Words:** International accounting research; Journals; Academic institutions; Authors; Academic rank; Methodology

***Abstract:*** *We analyze the international accounting research published in 30 U.S. academic journals and Accounting Organizations and Society (AOS) from 1980 to 1996 to provide strategies for those interested in pursuing academic careers in international accounting. We focus on the relationship between the most prolific authors and their academic environment. Our findings show that the set of authors and schools of the most prolific authors in international accounting in the U.S. are not the same as the set of the most prolific authors and schools of AOS. Neither the international accounting authors nor their academic affiliations were dominated by U.S. or U.K. academic institutions. The authors in international accounting were promoted within and between schools and many were full professors with professorships. The dominant research methods used and topics researched in AOS were different from those of U.S. journals. Young faculty should develop their career objective and align their employment and publication goals accordingly because they have a broad selection of mentors, universities and journals for which to target their research. Aligning research interests with academic environment choices should maximize an international accounting faculty's publication productivity and academic rank.*

The objective of this study is to analyze the relationship between international accounting research and authors within their academic environment from 1980 to 1996. We examine the most prolific international accounting authors, their journals of publication, school affiliation, academic rank and publication content in U.S. journals and *Accounting Organizations and Society (AOS)* from 1980 to 1996. Publication content focuses on methodology. Based on authors' publication records, we provide evidence on the output and persistence in output of international accounting researchers and on whether they obtained promotion between 1980 and 1996 at an academic institution. A comparison is made between the authorship of U.S. academic accounting journals with *AOS*, to identify similarities and differences in author behavior in

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achieving promotions or positions at quality academic institutions.[1] These results should be of interest to U.S. and non-U.S. academicians wanting to develop a strategy to ensure maximum benefits (quality publications,[2] promotion or affiliation with a quality academic institution) from their research efforts. Pierce and Garven (1995) conclude that a hit-and-miss approach to developing an author's research record is extremely risky.

Extant accounting literature contends that research is more heavily weighted in the tenure decision than teaching or service (see Cargile and Bublitz, 1986; Schultz et al., 1989; Boyer, 1990; Stone, 1996). Others conclude that research dominates salary increase decisions (see Benjamin and Brenner, 1974; Cargile and Bublitz, 1986; Hull and Wright, 1990). Administrators are encouraged to reward research because it is the single most important factor used when evaluating doctoral programs (Benjamin and Brenner, 1974; Hasselback and Reinstein, 1995). In British universities, promotion and tenure decisions are also heavily influenced by research output (Nobes 1985; Brinn et al., 1996). U.K. universities receive funding based on the Research Assessment Exercise's evaluation of the quality of its faculty's research publications. Universities' or colleges' quality perceptions are also based on the research record of the faculty. Thus, a comprehensive study on the research and academic rank and promotion of international authors is needed so that potential faculty members can align their international research interests with prospective employers' promotion and/or tenure requirements. Schools can also assess their own expectations regarding international accounting faculty. Results from this study offer suggestions about which universities recognize international accounting research as quality publications, and which journals are likely to publish international accounting research.

The findings of this study show that some of the most prolific international accounting authors are at 'the highest ranking schools' (Doyle and Arthur, 1995; Hasselback and Reinstein, 1995) and that their publications are in the most 'prestigious' (Brown and Huefner, 1994) academic accounting journals. Many prolific international accounting authors have been promoted and the most prolific authors of *AOS* tend to have professorships. The prolific authors in U.S. journals are not the same faculty as in U.K. journals and are usually not from the same academic institutions. The trend shows that much of U.S. international studies use survey descriptive methods whereas *AOS* studies use mostly field study and normative research methods. Results suggest that the prolific writers in U.S. and U.K. journals get promoted and/or tenured.

The remainder of this manuscript is structured as follows. The following section presents the literature review and how this study differs from previous studies. This leads to the methodology, including the database and academic environmental variables studied. Then the findings are presented on the more prolific authors in U.S. journals and *AOS*. Finally, conclusions are presented with suggestions for future research.

## LITERATURE REVIEW

Prior studies have analyzed the authorship of articles to identify the impact of their publications on contemporary accounting research (Brown and Gardner, 1985; Heck and Bremser, 1986; Bricker, 1988). For example, Brown and Gardner (1985) used

citation analysis to measure the impact of author's research on contemporary accounting research. They did not focus on international accounting. Leung (1988) and Chandy and Williams (1994) looked at the authorship of international authors, but only those published in a single journal. Leung (1988) studied the authors published in *The International Journal of Accounting Education and Research (IJAER)* and Chandy and Williams (1994) studied the authors published in *Journal of International Business Studies (JIBS)*. This study analyzes the authorship of international accounting research and does not attempt to measure their impact on accounting literature. Moreover, this study is not confined to *IJAER* or *JIBS* but includes 30 U.S. academic journals and *AOS*. Prather and Rueschhoff (1996) studied the international accounting article content of U.S. journals but did not study the environment of the authors or the content of *AOS*. Also, that study covers the 1980–1993 period, whereas this study covers the 1980–1996 period. Our intention is to provide evidence about the authorship, research method used, and academic environment for international accounting research in academic journals. These results should be helpful to those pursuing a career in the international accounting field of research. We also contrast the profile of U.S. journal authors with *AOS* authors. This research is the first to study the authors of international accounting research and their academic environment using a broad array of academic journals including *AOS*.

We analyze the research of authors and their academic affiliation to develop a strategy for maximizing research benefits. Pierce and Garven (1995) survey editors of leading journals to develop a timely publication strategy. Their research strategy is narrowly focused on selecting a journal for one's research. This study is more comprehensive because we analyze not only the journals, but also the methodology of the research and the academic environment suggestive of an overall career strategy in the international accounting field. Further, we compare international U.S. academic research with *AOS* publications to determine if there is a difference in the authors and their academic environment. We find that *AOS* and U.S. journals have an exclusive set of authors and that promotion and tenure have been received by the most prolific writers publishing in U.S. journals and *AOS*.

## DATABASE AND METHODOLOGY

The database includes international accounting articles published in 30 (see Prather and Rueschhoff, 1996) refereed U.S.-based academic accounting journals and a U.K. journal, *AOS*, from 1980 to 1996 (see Table 1). Book reviews, comments and editorial remarks are not included and only main articles are analyzed. This study uses the same database as Prather and Rueschhoff (1996) but also includes the years 1994–1996 and *AOS*. Doyle and Arthur (1995) state that British academics almost always publish in British-based journals. However, we found non-British academics publishing in *AOS*. Further, *AOS* is the most internationally subscribed and recognized U.K.-based journal.

Since this study focuses on international accounting research, *AOS* is studied because it represents a widely recognized U.K.-based international accounting research outlet for U.S. as well as non-U.S. authors. The U.S. database includes 1318 international

**Table 1.** International Content of U.S. Academic Accounting Journals 1980–1996

| *Journal* | *Year of origin* | *Number of issues* | *Number of international articles* | *Number of total articles* | *Percent of total articles* | *Number of articles in study* |
|---|---|---|---|---|---|---|
| Accounting Review | 1926 | 59 | 57 | 702 | 8.12 | 46 |
| Journal of Accounting Research | 1963 | 45 | 47 | 585 | 8.03 | 44 |
| International Journal of Accounting Education and Research | 1965 | 40 | 362 | 370 | 97.84 | 332 |
| Journal of Accounting, Auditing and Finance | 1977 | 59 | 64 | 494 | 12.96 | 50 |
| Accounting Historians Journal | 1977 | 30 | 96 | 223 | 43.05 | 59 |
| Journal of Accounting and Economics | 1979 | 51 | 31 | 273 | 11.36 | 20 |
| Journal of American Taxation Association | 1979 | 36 | 12 | 206 | 5.83 | 12 |
| Georgia Journal of Accounting | 1980 | 10 | 3 | 132 | 2.27 | 0 |
| Auditing | 1981 | 33 | 26 | 229 | 11.35 | 23 |
| Journal of Accounting Literature | 1982 | 15 | 9 | 107 | 8.41 | 4 |
| Journal of Accounting and Public Policy | 1982 | 49 | 23 | 209 | 11.00 | 10 |
| Journal of Petroleum Accounting | 1982 | 36 | 31 | 357 | 8.68 | 24 |
| Issues in Accounting Education | 1983 | 22 | 11 | 289 | 3.81 | 11 |
| Journal of Accounting Education | 1983 | 25 | 46 | 356 | 12.92 | 36 |
| Advances in Accounting | 1984 | 14 | 8 | 209 | 3.83 | 4 |
| Research in Government and Non-Profit Accounting | 1985 | 9 | 21 | 102 | 20.59 | 9 |
| The Journal of Information Systems | 1986 | 14 | 9 | 98 | 9.18 | 5 |
| Advances in Public Interest Accounting | 1986 | 6 | 22 | 71 | 30.99 | 11 |
| Advances in International Accounting | 1987 | 9 | 134 | 134 | 100.00 | 88 |
| Advances in Taxation | 1987 | 8 | 10 | 81 | 12.35 | 5 |
| Research in Accounting Regulation | 1987 | 10 | 19 | 115 | 16.52 | 11 |
| Accounting Horizons | 1987 | 31 | 39 | 292 | 13.36 | 29 |
| Accounting Educators Journal | 1988 | 16 | 16 | 156 | 10.26 | 11 |
| Accounting Systems Journal | 1989 | 3 | 2 | 38 | 5.26 | 1 |
| Behavioral Research in Accounting | 1989 | 9 | 18 | 84 | 21.43 | 17 |
| Journal of International Financial Management and Accounting | 1989 | 13 | 71 | 72 | 98.61 | 60 |
| Journal of Management Accounting Research | 1989 | 8 | 14 | 75 | 18.67 | 9 |
| Advances in Accounting Information Systems | 1992 | 4 | 2 | 34 | 5.88 | 0 |
| Journal of International Accounting, Auditing, Tax | 1992 | 10 | 72 | 72 | 100.00 | 64 |
| Advances in Management Accounting | 1993 | 5 | 8 | 59 | 13.56 | 4 |

*(continued)*

**Table 1.** (Continued)

| *Journal* | *Year of origin* | *Number of issues* | *Number of international articles* | *Number of total articles* | *Percent of total articles* | *Number of articles in study* |
|---|---|---|---|---|---|---|
| Petroleum Accounting and Financial Management Journal | 1994 | 9 | 35 | 89 | 39.33 | 26 |
| Totals for U.S. based journals | | 688 | 1318 | 6313 | 20.88 | 1025 |
| Accounting Organizations and Society | 1975 | 87 | 479 | 508 | 94.29 | 365 |
| Totals for all journals | | 775 | 1797 | 6821 | 26.35 | 1390 |

accounting articles. However, because we study the authorship, 13 articles were eliminated because the manuscripts did not include the author's name. Another 279 articles were eliminated because the school affiliation was not noted or could not be located on the Internet. Thus, there were 1025 U.S.-based journal articles or 1687 entries[3] and 365 *AOS* articles or 750 entries included in this study. The number of international accounting articles in this study is listed by journal in Table 1.

This study analyzes the journals of publication, rank, and school affiliation of international accounting researchers. Further, these authors' research content is analyzed based on methodology. The methods are classified as experiment, field study, normative, review/historical, survey/descriptive and theory development. (For a detailed definition of the methodology taxon, see Prather and Rueschhoff, 1996.)

The authorship of the international accounting articles was developed from reviewing articles in 30 U.S.-based academic journals and *AOS* between 1980 and 1996. If the author was affiliated with an institution outside of the journals' home-country or the article's content addressed an internationality dimension, the article was classified as international and the author was included in the database.

U.S. academic journals and *AOS* might have different authors because they were based in different countries, the U.S. and the U.K., respectively. Further, *AOS* is considered an international journal. The school affiliation of the authors was based on information in the article, Hasselback's *Accounting Faculty Directory*, and university home pages on the Internet.

Potential and present faculty with an interest in international accounting are probably interested in the likelihood of publishing in quality journals and being on faculty at quality academic institutions. Journal quality perception findings of Benjamin and Brenner (1974), Howard and Nikolai (1983), Nobes (1985), Hull and Wright (1990), Brown and Huefner (1994) and Brinn et al. (1996) were used to define quality journals. The most prestigious quality accounting journals included *The Accounting Review, Journal of Accounting Research, Accounting Organization and Society, Contemporary Accounting Research* and *Journal of Accounting and Economics*. Academic institution quality perceptions were typically based on faculty's research record. Therefore, quality schools included those listed in Hasselback and Reinstein (1995) (pp. 296–297) as the "25 highest ranking schools" in the U.S. and the top-ranked business and management schools of Doyle and Arthur (1995) in the U.K.[4] Finally, each article was reviewed to determine the methodology based on the Prather and Rueschhoff (1996) taxons.

**Table 2.** Authors of International Accounting Research: *U.S. Journals*

| *Author* | *Pre-1990* | *Post-1989* | *Total* |
|---|---|---|---|
| Doupnik, T.S. | 7 | 9 | 16 |
| Bloom, R. | 6 | 5 | 11 |
| Riahi-Belkaoui, A. | 4 | 7 | 11 |
| Freund, W.C. | 9 | 0 | 9 |
| Meek, G.K. | 5 | 3 | 8 |
| Perera, M.H. | 1 | 7 | 8 |
| Choi, F.D.S. | 3 | 4 | 7 |
| Ndubizu, G.A. | 4 | 3 | 7 |
| Amernic, J.H. | 3 | 3 | 6 |
| Baladouni, V. | 4 | 2 | 6 |
| Freitas, L.P. | 6 | 0 | 6 |
| Gray, S.J. | 4 | 2 | 6 |
| Tondkar, R.H. | 3 | 3 | 6 |
| Ziebart, D.A. | 2 | 4 | 6 |
| AlNajjar, F.K. | 2 | 3 | 5 |
| Datar, S. | 1 | 4 | 5 |
| Evans, T.G. | 3 | 2 | 5 |
| Fekrat, M.A. | 3 | 2 | 5 |
| Gernon, H. | 1 | 4 | 5 |
| Kantor, J. | 2 | 3 | 5 |
| Murphy, G.J. | 5 | 0 | 5 |
| Parker, L.D. | 1 | 4 | 5 |
| Roberts, C.B. | 0 | 5 | 5 |
| Saudagaran, S.M. | 1 | 4 | 5 |
| Simon, D.T. | 1 | 4 | 5 |
| Stout, D.E. | 2 | 3 | 5 |
| Aranya, N. | 2 | 2 | 4 |
| Baiman, S. | 0 | 4 | 4 |
| Berry, M.H. | 4 | 0 | 4 |
| Borkowski, S.C. | 0 | 4 | 4 |
| Callen, J.L. | 2 | 2 | 4 |
| Chow, C.W. | 2 | 2 | 4 |
| Coffman, E.N. | 2 | 2 | 4 |
| Comiskey, E.E. | 1 | 3 | 4 |
| Craig, R. | 0 | 4 | 4 |
| Davidson, R.A. | 0 | 4 | 4 |
| Edwards, J.R. | 3 | 1 | 4 |
| Feltham, G. | 0 | 4 | 4 |
| Firth, M. | 4 | 0 | 4 |
| Gibson, R.W. | 2 | 2 | 4 |
| Gray, D. | 3 | 1 | 4 |
| Gul, F.A. | 2 | 2 | 4 |
| Hagigi, M. | 3 | 1 | 4 |
| Harris, T.S. | 0 | 4 | 4 |
| Jensen, R.E. | 1 | 3 | 4 |
| Larkins, E.R. | 1 | 3 | 4 |
| McKinon, J. | 1 | 3 | 4 |
| Most, K. | 1 | 3 | 4 |
| Mulford, C.W. | 0 | 4 | 4 |
| Nobes, C.W. | 4 | 0 | 4 |

*(continued)*

**Table 2.** (Continued)

| *Author* | *Pre-1990* | *Post-1989* | *Total* |
|---|---|---|---|
| O'Connor, W. | 1 | 3 | 4 |
| Rajan, M. | 0 | 4 | 4 |
| Rezaee, Z. | 0 | 4 | 4 |
| Rolfe, R.J. | 1 | 3 | 4 |
| Rueschhoff, N.G. | 2 | 2 | 4 |
| Schweikart, J.A. | 4 | 0 | 4 |
| Wallace, R.S.O. | 0 | 4 | 4 |
| Wong-Boren, A. | 4 | 0 | 4 |
| Other | 486 | 900 | 1386 |
| Grand total | 619 | 1068 | 1687 |

## AUTHORSHIP ANALYSIS OF U.S. JOURNALS

Table 1 shows that 50% of the international accounting articles published in the 1980–1996 period in the U.S. journals were published in *The International Journal of Accounting Education and Research* (362 articles), *The Accounting Historians Journal* (96 articles), *Journal of International Accounting, Auditing and Taxation* (72 articles) and *Advances in International Accounting* (134 articles). *The Accounting Review* (TAR) (57 articles) published 4.3%, *Journal of Accounting Research* (JAR) published 3.6% and *Journal of Accounting and Economics* (JAE) published 2.3% of the total international accounting articles. For faculty with interests in international accounting and seeking employment at universities that only recognize TAR, JAR and JAE as acceptable journals for promotion and tenure, their publication potential is discouraging. However, *Journal of Accounting Research* published most of its international accounting articles during the 1990s. *Journal of Accounting Research*, one of the most prestigious quality journal, may now have a higher likelihood of publishing international accounting research than before 1990. Table 1 illustrates that *AOS* alone published 36% as much international accounting research than was published in all the U.S.-based journals between 1980 and 1996. This study supports that U.S. journals should consider publishing more international accounting research, especially with the increase in international business activity.

Table 2 identifies the more prolific authors, namely, those who have published at least four international accounting articles during 1980–1996 in U.S.-based academic journals. Among the most prolific authors who have published at least six international accounting articles between 1980 and 1996 and have been persistent[5] throughout 1980–1996 are T.S. Doupnik (16), R. Bloom (11), A. Riahi-Belkaoui (11), G.K. Meek (8), F. Perera (8), D.S. Choi (7), G.A. Ndubizu (7), J.H. Amernic (6), V. Baladouni (6), S.J. Gray (6), R.H. Tondkar (6) and D.A. Ziebart (6).[6] However, prolific authors such as W.C. Freund and L.P. Freitas discontinued publishing after 1989. The non-persistent authors may have retired or discontinued their affiliation with academic institutions. For example, W.C. Freund and L.P. Freitas are no longer affiliated with a college/university listing in Hasselback. Other authors (77%) have been persistent in publishing before and after 1990. Of the 1687 U.S. author entries, the more prolific authors published more than 17% (301 entries) of the international accounting research in U.S.-based academic accounting journals. Faculty

**Table 3.** University of Affiliation of Authors by Periods: *U.S. Journals*

| *School* | *Pre-1990* | *Post-1989* | *Total* |
|---|---|---|---|
| University of South Carolina | 13 | 18 | 31 |
| New York University | 9 | 20 | 29 |
| University of Toronto | 11 | 12 | 23 |
| Massey University | 3 | 19 | 22 |
| University of Illinois, Chicago | 6 | 14 | 20 |
| University of New South Wales | 10 | 10 | 20 |
| University of Hawaii-of-Manoa | 11 | 8 | 19 |
| Oklahoma State University | 5 | 13 | 18 |
| University of Houston | 1 | 17 | 18 |
| Chinese University of Hong Kong | 3 | 14 | 17 |
| Simon Fraser University | 6 | 11 | 17 |
| Stanford University | 4 | 13 | 17 |
| University of Illinois-Urbana-Champaign | 8 | 9 | 17 |
| University of Glasgow | 4 | 11 | 15 |
| University of Pennsylvania | 2 | 13 | 15 |
| Pennsylvania State University | 9 | 5 | 14 |
| Rutgers University | 4 | 10 | 14 |
| San Diego State University | 10 | 4 | 14 |
| University of Alberta | 4 | 10 | 14 |
| University of Saskatchewan | 10 | 4 | 14 |
| Pace University | 9 | 4 | 13 |
| University of British Columbia | 4 | 9 | 13 |
| Virginia Commonwealth University | 6 | 7 | 13 |
| Arizona State University | 4 | 8 | 12 |
| John Carroll University | 5 | 7 | 12 |
| McMaster University | 2 | 10 | 12 |
| Texas A&M University | 3 | 9 | 12 |
| University of Exeter | 4 | 8 | 12 |
| University of Southern California | 4 | 8 | 12 |
| Carnegie Mellon University | 3 | 8 | 11 |
| Georgia State University | 1 | 10 | 11 |
| University of California-Berkeley | 2 | 9 | 11 |
| University of Notre Dame | 5 | 6 | 11 |
| City Polytechnic University of Hong Kong | 0 | 10 | 10 |
| Drexel University | 4 | 6 | 10 |
| Fordham University | 1 | 9 | 10 |
| Macquarie University | 2 | 8 | 10 |
| Tel-Aviv University | 7 | 3 | 10 |
| University of Texas-Austin | 3 | 7 | 10 |
| Concordia University | 2 | 7 | 9 |
| University of Manchester | 7 | 2 | 9 |
| University of Washington | 5 | 4 | 9 |
| Wayne State University | 2 | 7 | 9 |
| Western Michigan University | 4 | 5 | 9 |
| Northwestern University | 3 | 5 | 8 |
| Ohio State University | 5 | 3 | 8 |
| University of Cardiff-Wales | 4 | 4 | 8 |
| University of Connecticut | 6 | 2 | 8 |
| University of Delaware | 7 | 1 | 8 |

*(continued)*

**Table 3.** (Continued)

| *School* | *Pre-1990* | *Post-1989* | *Total* |
|---|---|---|---|
| University of North Carolina, Chapel Hill | 1 | 7 | 8 |
| University of Wales | 2 | 6 | 8 |
| University of Wisconsin-Madison | 6 | 4 | 10 |
| Bowling Green State University | 2 | 5 | 7 |
| Case Western Reserve University | 2 | 5 | 7 |
| Cornell University | 1 | 6 | 7 |
| Helsinki School of Economics | 0 | 7 | 7 |
| Lehigh University | 2 | 5 | 7 |
| Trinity University | 1 | 6 | 7 |
| University of Florida | 5 | 2 | 7 |
| University of Mississippi | 4 | 3 | 7 |
| University of Missouri-Columbia | 2 | 5 | 7 |
| University of Nebraska-Lincoln | 3 | 4 | 7 |
| University of Oklahoma | 3 | 4 | 7 |
| University of Oregon | 2 | 5 | 7 |
| University of Otago | 3 | 4 | 7 |
| University of Waterloo | 3 | 4 | 7 |
| London School of Economics | 5 | 1 | 6 |
| Queens University | 1 | 5 | 6 |
| University of Alabama | 0 | 6 | 6 |
| University of Georgia | 5 | 1 | 6 |
| University of Indiana-Bloomington | 5 | 1 | 6 |
| University of Newcastle | 0 | 6 | 6 |
| University of New Orleans | 5 | 1 | 6 |
| University of Wellington-Victoria | 5 | 1 | 6 |
| University of Windsor | 3 | 3 | 6 |
| Other | 293 | 548 | 841 |
| Grand total | 611 | 1076 | 1687 |

seeking mentors in international accounting may want to consult with the most prolific and persistent writers.

The school affiliations of the authors are listed in Table 3. Only those schools whose faculty have at least six entries from 1980 to 1996 are identified by name. Faculty at the University of South Carolina published more international accounting research, 31 entries, than any other U.S. university. New York University, University of Toronto, Massey University, University of Illinois at Chicago, University of New South Wales, the University of Hawaii at Manoa, Oklahoma State University, the University of Houston, Chinese University of Hong Kong, Simon Fraser University, Stanford University and the University of Illinois at Urbana-Champaign are the other leading entries. Of these top 13 universities with 17 or more entries, 38% (five) are non-U.S. academic institutions. Further, of the next group of two universities with 15 entries, one is non-U.S. Thus, U.S. faculty compete heavily with faculty from non-U.S. schools for international accounting publications in a limited quantity of U.S. academic journals. Faculty may want to consider coauthoring with non-U.S. authors who specialize in the countries of their research interests.

Three of the top 13 schools were dominated by one author. T.S. Doupnik published 52% of the University of South Carolina entries, G.K. Meek published 44% of Oklahoma

**Table 4.** Academic Rank of Authors: *U.S. Journals*

| | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Professor | 17 | 12 | 20 | 19 | 25 | 22 | 17 | 18 | 15 | 23 | 42 | 49 | 33 | 27 | 37 | 46 | 46 | 468 |
| Associate Professor | 10 | 9 | 9 | 12 | 13 | 12 | 18 | 18 | 10 | 22 | 20 | 34 | 33 | 22 | 39 | 39 | 35 | 355 |
| Assistant Professor | 8 | 11 | 2 | 7 | 9 | 12 | 16 | 16 | 17 | 16 | 18 | 26 | 29 | 23 | 48 | 50 | 59 | 367 |
| Lecturer | 5 | 4 | 9 | 6 | 11 | 1 | 5 | 4 | 7 | 4 | 4 | 7 | 4 | 10 | 17 | 10 | 6 | 114 |
| Instructor | 2 | 5 | 2 | 2 | 1 | 7 | 2 | 4 | 4 | 3 | 11 | 7 | 4 | 3 | 1 | 0 | 1 | 59 |
| NA | 4 | 10 | 4 | 9 | 12 | 9 | 15 | 7 | 11 | 19 | 36 | 46 | 34 | 34 | 37 | 18 | 19 | 324 |
| Total | 46 | 51 | 46 | 55 | 71 | 63 | 73 | 67 | 64 | 87 | 131 | 169 | 137 | 119 | 179 | 163 | 166 | 1687 |

State University entries, and A. Riaha-Belkaoui published 55% of the University of Illinois-Chicago entries. The other top 13 schools' entries were not dominated by one author, though L.P. Freitas published 32% of the University of Hawaii-Manoa entries, M.H. Perera published 36% of the Massey University entries, J.H. Amernic published 26% of the University of Toronto entries, R.D. Davidson published 24% of the Simon Fraser University entries, F. Choi published 30% of the New York University entries, and D.A. Ziebart published 35% of the University of Illinois-Champaign-Urbana entries.

Five of the top 13 schools with international accounting authors were included in the top 25 academic institutions as defined by Hasselback and Reinstein (1995): University of Illinois-Champaign-Urbana, University of Illinois-Chicago, New York University, Stanford University, and University of South Carolina. Five of the top 13 schools were non-U.S. and were thus not included in the Hasselback and Reinstein (1995) study. The other three of the top 13 U.S. schools are not ranked in the top 25 by Hasselback and Reinstein. These findings provided evidence that international accounting research was being conducted by faculty at top-ranking U.S. universities. Junior faculty interested in pursuing a career in international accounting at one of the top-ranked schools have a number of university choices.

Table 4 illustrates the rank of authors publishing international accounting research. Most of the faculty, 29% (468), are full professors, 21% (355) are associate professors and 22% (367) are assistant professors. Of the 14 most prolific authors, seven were promoted within or between universities, i.e., T.S. Doupnik was promoted from assistant to associate to full professor at the University of South Carolina; G.K. Meek was promoted from assistant to associate to full professor at Oklahoma State University; G.S. Ndubizu was promoted from assistant to associate professor at Drexel University; J.H. Amernic was promoted from associate to full professor at the University of Toronto; M.H. Perera was promoted from associate to full professor at Massey University; A. Riahi-Belkaoui moved from associate professor at the University of Ottawa to full professor at the University of Illinois-Chicago; F.D. Choi was promoted from full professor to chairman at New York University; R.H. Tondkar was promoted from assistant to associate to full professor at Virginia Commonwealth; D. Ziebart was promoted from assistant to associate to full professor at the University of Illinois; and W.C. Freund moved from associate professor at the University of Ottawa to full professor at Pace University. The other four were full professors throughout 1980–1996. V. Baladouni was a full professor at the University of New Orleans; R. Bloom was full professor at John Caroll University; L.P. Freitas was a

**Table 5.** Methodology Used by Authors: *U.S. Journals*

| *Author* | *Experiment* | *Field study* | *Normative* | *Review/ Historical* | *Survey/ Descriptive* | *Theory development* | *Total* |
|---|---|---|---|---|---|---|---|
| Doupnik, T.S. | 2 | 4 | 0 | 0 | 9 | 1 | 16 |
| Bloom, R. | 0 | 1 | 1 | 0 | 9 | 0 | 11 |
| Riahi-Belkaoui, A. | 1 | 7 | 0 | 0 | 2 | 1 | 11 |
| Freund, W.C. | 0 | 0 | 3 | 3 | 3 | 0 | 9 |
| Meek, G.K. | 0 | 3 | 0 | 1 | 3 | 1 | 8 |
| Perera, M.H. | 0 | 0 | 1 | 1 | 3 | 3 | 8 |
| Choi, F.D.S. | 0 | 0 | 1 | 0 | 5 | 1 | 7 |
| Ndubizu, G.A. | 0 | 4 | 0 | 0 | 1 | 2 | 7 |
| Amernic, J.H. | 1 | 0 | 1 | 0 | 3 | 1 | 6 |
| Baladouni, V. | 0 | 0 | 0 | 5 | 0 | 1 | 6 |
| Freitas, L.P. | 0 | 0 | 0 | 0 | 6 | 0 | 6 |
| Gray, S.J. | 0 | 1 | 1 | 1 | 3 | 0 | 6 |
| Tondkar, R.H. | 0 | 2 | 0 | 1 | 3 | 0 | 6 |
| Ziebart, D.A. | 0 | 5 | 0 | 0 | 1 | 0 | 6 |
| AlNajjar, F.K. | 0 | 1 | 1 | 1 | 1 | 1 | 5 |
| Datar, S. | 0 | 1 | 0 | 1 | 0 | 3 | 5 |
| Evans, T.G. | 0 | 1 | 0 | 0 | 4 | 0 | 5 |
| Fekrat, M.A. | 0 | 1 | 1 | 0 | 3 | 0 | 5 |
| Gernon, H. | 0 | 0 | 1 | 2 | 1 | 1 | 5 |
| Kantor, J. | 0 | 0 | 0 | 0 | 4 | 1 | 5 |
| Murphy, G.J. | 0 | 0 | 0 | 4 | 1 | 0 | 5 |
| Parker, L.D. | 0 | 0 | 0 | 2 | 2 | 1 | 5 |
| Roberts, C.B. | 0 | 2 | 0 | 0 | 3 | 0 | 5 |
| Saudagaran, S.M. | 0 | 3 | 0 | 1 | 0 | 1 | 5 |
| Simon, D.T. | 0 | 3 | 0 | 1 | 0 | 1 | 5 |
| Stout, D.E. | 0 | 0 | 0 | 1 | 4 | 0 | 5 |
| Aranya, N. | 1 | 2 | 0 | 0 | 0 | 1 | 4 |
| Baiman, S. | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| Berry, M.H. | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| Borkowski, S.C. | 0 | 1 | 0 | 0 | 2 | 1 | 4 |
| Callen, J.L. | 0 | 1 | 1 | 0 | 1 | 1 | 4 |
| Chow, C.W. | 0 | 2 | 0 | 0 | 2 | 0 | 4 |
| Coffman, E.N. | 0 | 1 | 0 | 0 | 3 | 0 | 4 |
| Comiskey, E.E. | 0 | 2 | 0 | 0 | 2 | 0 | 4 |
| Craig, R. | 0 | 0 | 1 | 0 | 3 | 0 | 4 |
| Davidson, R.A. | 2 | 0 | 0 | 0 | 1 | 1 | 4 |
| Edwards, J.R. | 0 | 0 | 0 | 4 | 0 | 0 | 4 |
| Feltham, G. | 0 | 2 | 0 | 0 | 1 | 1 | 4 |
| Firth, M. | 0 | 2 | 0 | 0 | 1 | 1 | 4 |
| Gibson, R.W. | 1 | 1 | 0 | 0 | 2 | 0 | 4 |
| Gray, D. | 0 | 1 | 0 | 0 | 3 | 0 | 4 |
| Gul, F.A. | 1 | 1 | 0 | 0 | 2 | 0 | 4 |
| Hagigi, M. | 0 | 2 | 0 | 0 | 2 | 0 | 4 |
| Harris, T.S. | 0 | 3 | 0 | 0 | 1 | 0 | 4 |
| Jensen, R.E. | 0 | 1 | 1 | 1 | 1 | 0 | 4 |
| Larkins, E.R. | 0 | 0 | 1 | 0 | 2 | 1 | 4 |
| McKinnon, J. | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| Most, K. | 0 | 0 | 0 | 1 | 3 | 0 | 4 |
| Mulford, C.W. | 0 | 2 | 0 | 0 | 2 | 0 | 4 |

*(continued)*

**Table 5.** (Continued)

| Author | Experiment | Field study | Normative | Review/ Historical | Survey/ Descriptive | Theory development | Total |
|---|---|---|---|---|---|---|---|
| Nobes, C.W. | 0 | 0 | 1 | 1 | 2 | 0 | 4 |
| O'Connor, W. | 1 | 0 | 0 | 0 | 3 | 0 | 4 |
| Rajan, M. | 0 | 0 | 0 | 0 | 3 | 1 | 4 |
| Rezaee, A. | 0 | 3 | 0 | 0 | 1 | 0 | 4 |
| Rolfe, R.J. | 3 | 0 | 0 | 0 | 1 | 0 | 4 |
| Rueschhoff, N.G. | 0 | 0 | 0 | 0 | 4 | 0 | 4 |
| Schweikart, J.A. | 1 | 0 | 1 | 0 | 2 | 0 | 4 |
| Wallace, R.S.O. | 0 | 0 | 1 | 1 | 2 | 0 | 4 |
| Wong-Boren, A. | 0 | 2 | 0 | 0 | 2 | 0 | 4 |
| Other | 57 | 213 | 93 | 175 | 642 | 206 | 1386 |
| Grand total | 71 | 281 | 111 | 208 | 782 | 234 | 1687 |

full professor at the University of Hawaii; and S.J. Gray was a full professor at the University of Glasgow. Young faculty looking for mentors in international accounting may want to consider such universities that value international accounting research in promotion decisions.

Table 5 shows the methodology employed by faculty conducting international accounting research in U.S. journals. The top 14 faculty tended to employ the survey/descriptive methodology, 45% (51 entries). This trend indicates that academic international accounting research is in its infancy in development. However, field studies, which include empirical research, represent 24% (27) of the research methods used by the top 14 authors. Reviewing the 1687 entries shows that 782 or 46% of all the authors employed the survey/descriptive method and 17% (281) used the field study method. The total results are similar to that of the top 14 researchers. Only four of the top 14 authors used the experiment approach. Similarly, the lowest number of methodology entries for all 1687 entries was the experiment approach, 4% (71 entries). As more and more survey/descriptive research is conducted, its results can be used to provide the theory necessary to conduct and explain the results of field studies.[7]

About one-third of the entries authored or coauthored by the authors of four or more entries were published in the *International Journal of Accounting*. This is shown in Table 6. Another 18% were published in *Advances in International Accounting*. Actually, the top three authors published 32 (84%) of their 38 entries in these two academic international accounting journals. The next three journals for the authors of four of more entries were the *Journal of Accounting, Auditing, and Finance*, the *Accounting Historians Journal* and the *Journal of Accounting Research*, with a total of 20%. In contrast, the total entries for all authors were also about one-third in the *International Journal of Accounting* but only 9% in *Advances in International Accounting*. The next highest outlets for all authors were in five journals, namely, the *Accounting Historians Journal*, the *Journal of Accounting, Auditing, and Finance*, the *Accounting Review*, the *Journal of Accounting Research*, and *Accounting Horizons*, with a total of 26%. Certainly, the academic international accounting journals have served as the key outlets for the development of international accounting research. The fact that these journals have evidently been recognized as viable publication outlets for promotion of the top 10 authors may be considered encouraging for young

**Table 6.** Distribution of Publications by Author: *U.S. Journals*[a]

| | *IJA* | *ADVIA* | *JIFMA* | *AR* | *JAR* | *AH* | *AHJ* | *JAAF* | *JAPP* | *JIAAT* | *JAL* | *JAED* | *Other* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Author name* | | | | | | | | | | | | | *Name* | *Number* | *Total* |
| Doupnik, T.S. | 7 | 7 | | | | | 1 | | | | | | ADVA | 1 | 16 |
| Bloom, R. | 5 | 6 | | | | | | | | | | | | | 11 |
| Riahi-Belkaoui, A. | 2 | 5 | | | 1 | | | | 1 | | | | RIAR | 2 | 11 |
| Freund, W.C. | | | | | | | | 9 | | | | | | | 9 |
| Meek, G.K. | 2 | | 2 | 1 | | 1 | | | | | 1 | 1 | | | 8 |
| Perera, M.H. | 3 | 3 | 1 | | | | 1 | | | | | | | | 8 |
| Choi, F.D.S. | 2 | | 3 | | | 1 | | 1 | | | | | | | 7 |
| Ndubizu, G.A. | 5 | 2 | | | | | | | | | | | | | 7 |
| Amernic, J.H. | 4 | | | | | | | | | | | | BRIA | 1 | |
| | | | | | | | | | | | | | ISAE | 1 | 6 |
| Baladouni, V. | | | | | | | 6 | | | | | | | | 6 |
| Freitas, L.P. | | | | | | | | 6 | | | | | | | 6 |
| Gray, S.J. | 2 | | 1 | | 1 | 2 | | | | | | | | | 6 |
| Tondkar, R.H. | 3 | 1 | 1 | | | | | | | | | 1 | | | 6 |
| Ziebart, D.A. | 1 | | | 1 | | | | 3 | | | | | JATA | 1 | 6 |
| AlNajjar, R.H. | 3 | 1 | 0 | | | 1 | | | | | | | | | 5 |
| Datar, S. | | | | 1 | 3 | | | | | | | | JAE | 1 | 5 |
| Evans, T.G. | 3 | 2 | | | | | | | | | | | | | 5 |
| Fekrat, M.A. | 3 | 2 | | | | | | | | | | | | | |
| Gernon, H. | | | | | | 1 | | | | | 2 | | RIAR | 1 | |
| | | | | | | | | | | | | | ADVA | 1 | 5 |
| Kantor, J. | 3 | 2 | | | | | | | | | | | | | 5 |
| Murphy, G.J. | 2 | | | | | | 3 | | | | | | | | 5 |
| Parker, L.D. | 1 | | | 1 | | | | | | 1 | | | ADVPI | 2 | 5 |
| Roberts, C.D. | | 2 | 1 | | | 1 | | | | 1 | | | | | 5 |
| Saudagaran, S.M. | | | 2 | | | 1 | | | | | 1 | | RIAR | 1 | 5 |
| Simon, D.T. | 3 | 1 | | | | | | 1 | | | | | | | 5 |
| Stout, D.E. | | 1 | | | | | | | | | | 3 | ISAE | 1 | 5 |

*(continued)*

**Table 6.** (Continued)

| | IJA | ADVIA | JIFMA | AR | JAR | AH | AHJ | JAAF | JAPP | JIAAT | JAL | JAED | Other | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Author name | | | | | | | | | | | | | Name | Number | Total |
| Aranya, N. | 2 | | | | | | | | | | | | JMAR | 1 | |
| | | | | | | | | | | | | | BRIA | 1 | 4 |
| Baiman, S. | | | | 1 | 3 | | | | | | | | | | 4 |
| Berry, M.H. | 3 | 1 | | | | | | | | | | | | | 4 |
| Borkowski, S.C. | 2 | 1 | | | | | | | | 1 | | | | | 4 |
| Callen, J.L. | 1 | | | 1 | | | | 1 | | | | | JMAR | 1 | 4 |
| Chow, C.W. | 1 | 1 | 1 | 1 | | | | | | | | | | | 4 |
| Coffman, E.N. | 2 | 1 | | | | | | | | | | 1 | | | 4 |
| Comiskey, E.E. | 1 | 2 | | | | | | | 1 | | | | | | 4 |
| Craig, R. | 2 | 1 | | | | | | | | | | | ISAE | 1 | 4 |
| Davidson, R.A. | 1 | | | | | 1 | | | | | | 1 | Aud: J | 1 | 4 |
| Edwards, J.R. | | | | | | | 4 | | | | | | | | 4 |
| Feltham, G. | | | | | 1 | | | | | | | 3 | | | 4 |
| Firth, M. | 1 | | | 1 | 1 | | | | | | | | Aud: J | 1 | 4 |
| Gibson, R.W. | | 1 | | | | | 3 | | | | | | | | 4 |
| Gray, D. | 2 | 1 | | | 1 | | | | | | | | | | 4 |
| Gul, F.A. | 2 | | | | | | | | | 1 | | 1 | | | 4 |
| Hagigi, M. | 4 | | | | | | | | | | | | | | 4 |
| Harris, T.S. | | | 1 | | 3 | | | | | | | | | | 4 |
| Jensen, R.E. | 2 | | | | | | | | | | | 1 | ADVPI | 1 | 4 |
| Larkins, E.R. | | | | | | | | | | | | | ADVTAX | 2 | |
| | | | | | | | | | | | | | JATA | 1 | |
| | | | | | | | | | | | | | JMAR | 1 | 4 |
| McKinon, J. | 1 | | 1 | | | | | | 1 | 1 | | | | | 4 |
| Most, K. | 1 | 3 | | | | | | | | | | | | | 4 |
| Mulford, C.W. | | 2 | | | | | | | 1 | | | 1 | | | 4 |
| Nobes, C.W. | 1 | | | 2 | 1 | | | | | | | | | | 4 |
| O'Connor, W. | 1 | | | | | | | | | 1 | | | ADVTX | 1 | |
| | | | | | | | | | | | | | ISAE | 1 | 4 |

*(continued)*

**Table 6.** (Continued)

| Author name | *IJA* | *ADVIA* | *JIFMA* | *AR* | *JAR* | *AH* | *AHJ* | *JAAF* | *JAPP* | *JIAAT* | *JAL* | *JAED* | *Other* Name | *Other* Number | *Total* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rajan, M. | | | | 1 | 3 | | | | | | | | | | 4 |
| Rezaee, Z. | 2 | 1 | | | | | | 1 | | | | | | | 4 |
| Rolfe, R.J. | 1 | 1 | | | | | | | | | | | ADVA | 1 | |
| | | | | | | | | | | | | | JATA | 1 | 4 |
| Rueschhoff, N.G. | 1 | 2 | | | | 1 | | | | | | | | | 4 |
| Schweikart, J.A. | 3 | | | | | | | | | | | | ISAE | 1 | 4 |
| Wallace, R.S.O. | | | | | | 2 | | | 1 | | 1 | | | | 4 |
| Wong-Boren, A. | 3 | | | 1 | | | | | | | | | | | 4 |
| Sub-total | 94 | 53 | 14 | 12 | 18 | 12 | 18 | 22 | 5 | 6 | 5 | 13 | | 29 | 301 |
| Other | 455 | 96 | 41 | 74 | 67 | 60 | 78 | 72 | 20 | 20 | 6 | 9 | | 391 | 1386 |
| Total | 549 | 149 | 55 | 86 | 85 | 72 | 96 | 94 | 25 | 26 | 11 | 22 | | 420 | 1687 |

[a]Legend (acronyms): IJA — International Journal of Accounting; ADVA — Advances in Accounting; ADVIA — Advances in International Accounting; RIAR — Research in Accounting Regulation; JIFMA — Journal of International Financial Management and Accounting; BRIA — Behavioral Research in Accounting; AR — The Accounting Review; ISAE — Issues in Accounting Education; JAR — The Journal of Accounting Research; JATA — Journal of American Taxation Association; AH — Accounting Horizons; JAE — Journal of Accounting and Economics; AHJ — Accounting Historians Journal; ADVPI — Advances in Public Interest Accounting; JAPP — Journal of Accounting and Public Policy; JMAR — Journal of Management Accounting Research; JIAAT — Journal of International Accounting Auditing and Taxation; Aud: J — Auditing: Journal of Theory and Practice; JAL — Journal of Accounting Literature; ADVTAX — Advances in Taxation; JAAF — Journal of Accounting, Auditing, and Finance; JAED — Journal of Accounting Education.

**Table 7.** Authors of International Accounting Research: *AOS*

| *Author* | *Pre-1990* | *Post-1989* | *Total* |
|---|---|---|---|
| Dirsmith, M. | 6 | 8 | 14 |
| Covaleski, M. | 6 | 5 | 11 |
| Shields, M. | 8 | 2 | 10 |
| Birnberg, J. | 6 | 1 | 7 |
| Cooper, D. | 4 | 3 | 7 |
| Preston, A. | 2 | 5 | 7 |
| Ferris, K. | 6 | 0 | 6 |
| Harrell, A. | 3 | 3 | 6 |
| Merchant, K. | 3 | 3 | 6 |
| Tinker, T. | 4 | 2 | 6 |
| Arrington, C.E. | 2 | 3 | 5 |
| Boland, R. | 4 | 1 | 5 |
| Flamholtz, E. | 5 | 0 | 5 |
| Gordon, L. | 3 | 2 | 5 |
| Macintosh, N. | 2 | 3 | 5 |
| Miller, P. | 1 | 4 | 5 |
| Pratt, J. | 3 | 2 | 5 |
| Waller, W. | 5 | 0 | 5 |
| Dillard, J. | 3 | 1 | 4 |
| Govindarajan, V. | 4 | 0 | 4 |
| Harrison, G. | 1 | 3 | 4 |
| Hopper, T. | 2 | 2 | 4 |
| Lewis, B. | 4 | 0 | 4 |
| Libby, R. | 1 | 3 | 4 |
| Neu, D. | 0 | 4 | 4 |
| O'Leary, T. | 2 | 2 | 4 |
| Power, M. | 0 | 4 | 4 |
| Richardson, A. | 3 | 1 | 4 |
| Trotman, K. | 2 | 2 | 4 |
| Williams, J. | 3 | 1 | 4 |
| Williams, P. | 4 | 0 | 4 |
| Young, S.M. | 2 | 2 | 4 |
| Other | 343 | 231 | 574 |
| Grand total | 447 | 303 | 750 |

faculty. The fact that very high quality non-international academic journals are among the outlets for international accounting research is also encouraging.

## AUTHORSHIP ANALYSIS OF *AOS*

Table 1 shows that 479 (750 entries) international accounting studies were published in *AOS*. This represents a greater percentage of international articles (94%) by *AOS* during 1980–1996 than did all U.S. journals (21%). Researchers looking for a publication outlet for international accounting research may want to consider *AOS* because of its high concentration of international articles and because it is ranked as one of the most prestigious quality academic accounting journals (Howard and Nikolai, 1983; Nobes,

**Table 8.** University of Affiliation of Authors by Periods: *AOS*

| *School* | *Pre-1990* | *Post-1989* | *Total* |
|---|---|---|---|
| University of Pittsburgh | 18 | 3 | 21 |
| University of Alberta | 9 | 9 | 18 |
| Pennsylvania State University | 9 | 8 | 17 |
| London School of Economics and Political Science | 1 | 15 | 16 |
| University of New South Wales | 7 | 9 | 16 |
| University of Manchester | 6 | 7 | 13 |
| University of Southern California | 7 | 6 | 13 |
| Ohio State University | 10 | 2 | 12 |
| University of Arizona | 11 | 1 | 12 |
| University of California, Los Angeles | 11 | 1 | 12 |
| University of Wisconsin-Madison | 7 | 5 | 12 |
| University of Minnesota | 9 | 2 | 11 |
| City University of New York | 6 | 4 | 10 |
| San Diego State University | 4 | 6 | 10 |
| University of Washington | 10 | 0 | 10 |
| Harvard University | 6 | 3 | 9 |
| Queen's University | 4 | 5 | 9 |
| University of Calgary | 0 | 9 | 9 |
| Arizona State University | 7 | 1 | 8 |
| Macquarie University | 4 | 4 | 8 |
| University of Iowa | 5 | 3 | 8 |
| University of Manchester Institute of Science and Technology | 6 | 2 | 8 |
| Cornell University | 5 | 2 | 7 |
| Monash University | 4 | 3 | 7 |
| Southern Methodist University | 7 | 0 | 7 |
| University of Illinois at Urbana-Champaign | 6 | 1 | 7 |
| University of Maryland | 6 | 1 | 7 |
| Boston University | 4 | 2 | 6 |
| University of Lancaster | 4 | 2 | 6 |
| University of Leeds | 4 | 2 | 6 |
| University of Sheffield | 4 | 2 | 6 |
| University of Texas at Austin | 6 | 0 | 6 |
| York University | 5 | 1 | 6 |
| Other | 235 | 182 | 417 |
| Grand total | 447 | 303 | 750 |

1985; Hull and Wright, 1990; Brown and Huefner, 1994; Hasselback and Reinstein, 1995; Brinn et al., 1996). International accounting faculty should ask their universities if *AOS* is acceptable as one of the most prestigious quality journals for promotion or tenure because *AOS* has a higher concentration of international accounting research than the *Accounting Review*, the *Journal of Accounting Research* or the *Journal of Accounting and Economics*.

Table 7 lists those authors who have published at least four international accounting articles during 1980–1996 in *AOS*. They are identified by name in the table. Of the "most prolific authors" (those that have published at least six international accounting articles between 1980 and 1996) of *AOS*, the ones who have been persistent from 1980 to 1996 are M. Dirsmith, M. Covaleski, M. Shields, J. Birnberg, D. Cooper, A. Preston, A. Harrell, K. Merchant, and T. Tinker. None of these authors appeared in the top 14 U.S. authors, i.e., most of these writers (nine of 10) have been persistent in publishing in *AOS* before and

**Table 9.** Academic Rank of Authors: *AOS*

| | *80* | *81* | *82* | *83* | *84* | *85* | *86* | *87* | *88* | *89* | *90* | *91* | *92* | *93* | *94* | *95* | *96* | *Total* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Professor | 11 | 12 | 6 | 9 | 7 | 6 | 4 | 13 | 9 | 14 | 11 | 9 | 10 | 17 | 12 | 8 | 7 | 165 |
| Associate Professor | 4 | 4 | 12 | 4 | 7 | 6 | 15 | 4 | 14 | 14 | 11 | 9 | 12 | 10 | 4 | 4 | 10 | 144 |
| Assistant Professor | 11 | 3 | 15 | 5 | 12 | 5 | 5 | 10 | 6 | 16 | 6 | 10 | 13 | 8 | 11 | 5 | 5 | 146 |
| Lecturer | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 3 | 4 | 4 | 4 | 8 | 1 | 1 | 30 |
| Instructor | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| NA | 18 | 17 | 5 | 16 | 18 | 15 | 21 | 20 | 28 | 19 | 12 | 24 | 16 | 18 | 4 | 9 | 3 | 263 |
| Total | 44 | 36 | 40 | 34 | 44 | 35 | 45 | 47 | 57 | 65 | 43 | 56 | 55 | 57 | 39 | 27 | 26 | 750 |

after 1990. Of the 750 author entries, the top 10 authors in *AOS* published over 10% (80 entries).

The school affiliations of the authors of international accounting articles in *AOS* are listed in Table 8. Only those schools whose faculty have published at least six entries during 1980–1996 are identified by name. Faculty at the University of Pittsburgh published more international accounting research in *AOS*, 21 entries, than any other university. Further, the University of Alberta, Pennsylvania State University, the London School of Economics and Political Science, and the University of New South Wales have the leading number (more than 15 each) entries of authors publishing in *AOS*. One of these schools overlaps with the top 13 schools in the U.S. journals, namely, the University of New South Wales. Of the five universities with 16 or more entries, three (60%) are non-U.S. academic institutions. U.S. faculty, thus, compete heavily with faculty from non-U.S. schools for international accounting publications in *AOS*.

Of the authors at the top five schools with *AOS* entries, M. Dirsmith published 82% of Pennsylvania State University's entries, J. Birnberg published 33% of the University of Pittsburgh's entries, and P. Miller published 31% of the London School of Economics and Political Science's entries. Thus, of the top five school's *AOS* entries, only one was dominated by one author.

Two of top five *AOS* schools are U.S. universities included in the top 25 schools as defined by Hasselback and Reinstein (1995). The other three top *AOS* schools are not included in the top 25 schools of Hasselback and Reinstein (1995) because they are non-U.S. universities. However, the London School of Economics and Political Science is listed among the 20 most published schools in the U.K. (see Doyle and Arthur, 1995). This finding signifies that international accounting research is being conducted by faculty at top-ranking U.K. and U.S. universities.

Table 9 shows the rank of *AOS* authors publishing international accounting research. The greatest number of faculty was comprised of full professors 22% (165), 19% (144) are associate professors and another 19% (146) are assistant professors. Among the most prolific authors, eight were promoted within or between universities. For example, M. Dirsmith was promoted from assistant to associate to full professor at Pennsylvania State University; M. Covaleski was promoted from assistant to associate to full professor at the University of Wisconsin-Madison. M. Shields moved from assistant professor at University of North Carolina-Chapel Hill to associate professor at the University of Arizona to full professor at San Diego State University; A. Preston was promoted from assistant to

**Table 10.** Methodology Used by Authors: *AOS*

| *Author* | *Experiment* | *Field study* | *Normative* | *Review/ Historical* | *Survey/ Descriptive* | *Theory development* | *Total* |
|---|---|---|---|---|---|---|---|
| Dirsmith, M. | 2 | 2 | 4 | 2 | 3 | 1 | 14 |
| Covaleski, M. | 0 | 1 | 4 | 4 | 1 | 1 | 11 |
| Shields, M. | 6 | 0 | 0 | 1 | 2 | 1 | 10 |
| Birnberg, J. | 2 | 1 | 0 | 3 | 0 | 1 | 7 |
| Cooper, D. | 0 | 2 | 3 | 1 | 1 | 0 | 7 |
| Preston, A. | 1 | 2 | 1 | 1 | 1 | 1 | 7 |
| Ferris, K. | 0 | 3 | 0 | 0 | 3 | 0 | 6 |
| Harrell, A. | 3 | 0 | 0 | 1 | 1 | 1 | 6 |
| Merchant, K. | 0 | 3 | 0 | 0 | 2 | 1 | 6 |
| Tinker, T. | 0 | 2 | 0 | 2 | 1 | 1 | 6 |
| Arrington, C.E. | 0 | 0 | 4 | 0 | 0 | 1 | 5 |
| Boland, R. | 0 | 1 | 1 | 2 | 0 | 1 | 5 |
| Flamholtz, E. | 0 | 2 | 0 | 0 | 0 | 3 | 5 |
| Gordon, L. | 0 | 1 | 3 | 0 | 1 | 0 | 5 |
| Macintosh, N. | 0 | 1 | 0 | 1 | 2 | 1 | 5 |
| Miller, P. | 0 | 1 | 2 | 1 | 0 | 1 | 5 |
| Pratt, J. | 2 | 1 | 0 | 0 | 2 | 0 | 5 |
| Waller, W. | 4 | 0 | 0 | 1 | 0 | 0 | 5 |
| Dillard, J. | 0 | 0 | 0 | 0 | 1 | 3 | 4 |
| Govindarajan, V. | 0 | 1 | 0 | 0 | 1 | 2 | 4 |
| Harrison, G. | 1 | 1 | 1 | 0 | 1 | 0 | 4 |
| Hopper, T. | 0 | 0 | 3 | 1 | 0 | 0 | 4 |
| Lewis, B. | 0 | 0 | 0 | 2 | 1 | 1 | 4 |
| Libby, R. | 1 | 0 | 1 | 1 | 0 | 1 | 4 |
| Neu, D. | 0 | 2 | 1 | 0 | 0 | 1 | 4 |
| O'Leary, T. | 0 | 1 | 2 | 1 | 0 | 0 | 4 |
| Power, M. | 0 | 0 | 1 | 2 | 1 | 0 | 4 |
| Richardson, A. | 0 | 1 | 1 | 1 | 0 | 1 | 4 |
| Trotman, K. | 2 | 0 | 1 | 0 | 1 | 0 | 4 |
| Williams, J. | 1 | 0 | 2 | 0 | 1 | 0 | 4 |
| Williams, P. | 1 | 0 | 2 | 0 | 1 | 0 | 4 |
| Young, S.M. | 1 | 1 | 0 | 1 | 0 | 1 | 4 |
| Other | 70 | 101 | 155 | 80 | 86 | 82 | 574 |
| Grand total | 97 | 131 | 192 | 109 | 114 | 107 | 750 |

associate professor at the University of New Mexico; A. Harell moved from assistant professor at the University of Texas at Austin to associate professor at the University of South Carolina where he was promoted to full professor; K. Merchant was promoted from assistant professor to associate professor at Harvard and moved to full professor at the University of Southern California; and T. Tinker, an associate professor at the University of California at Los Angeles, moved to CUNY-Baruch as full professor. Two authors were full professors throughout 1980–1996: J. Birnberg at University of Pittsburgh and D. Cooper at the University of Alberta. Faculty looking for mentors in international accounting and at universities that value international accounting research in their promotion decisions may want to consider such universities that will recognize their work.

Table 10 shows the methodology employed by faculty conducting international accounting research. The top 10 faculty tended to use field study, 20% (16 entries), review/historical, 19% (15 entries), survey/descriptive, 19% (15 entries), and experiment, 18% (14 entries), research methods. This trend indicates that international accounting research has grown beyond infancy in *AOS*. Of the 750 entries, 192 or 26% of the authors employed the normative research method and 17% (131) used the field study method. The total research results strengthen the evidence that international accounting research is beyond its infancy in *AOS*.

## U.S. JOURNAL AND *AOS* COMPARISONS

Overall, *AOS* has a higher concentration of international accounting articles than U.S. academic journals. However, several U.S. international journals have a higher concentration of international accounting research than *AOS*; e.g., *International Journal of Accounting Education and Research,* 97.8%; *Advances in International Accounting,* 100%; *Journal of International Financial Management and Accounting,* 98.6%, and *Journal of International Accounting, Auditing and Taxation,* 100%.

The top 14 authors of the U.S. journals do not include the top 10 authors of *AOS*. This maybe because U.S. journals tended to use the survey/descriptive method whereas *AOS* authors tended to use the normative methodology about universal issues on managerial accounting topics. With the exception of the University of New South Wales, the most prolific authors in U.S. journals were from different academic institutions as compared to authors of *AOS*.

Most of the prolific authors of U.S. journals and *AOS* were persistent in publishing both pre- and post-1990. The school affiliation of many of the prolific authors tended to be among the top institutions listed in Doyle and Arthur (1995) and Hasselback and Reinstein (1995). When comparing *AOS* with U.S. journals, no one individual dominates international accounting authorship across *AOS* and U.S. journals. Nor is it dominated by any one school.

In reviewing the topics along with the methods in the international accounting articles, the focus of the research tended to differ between U.S. journals and *AOS*. U.S. authors tended to use survey/descriptive methods on financial accounting and reporting topics whereas *AOS* authors tended to use the normative methodology about managerial accounting topics. One might conclude that *AOS* fills a void in international accounting research that is not provided by U.S. journals. Managerial issues may be more likely published in *AOS* and financial reporting issues may be more likely published in U.S. academic journals.

## CONCLUSIONS

The objective of this study was to analyze the authorship of international accounting research of U.S. academic journals and *AOS* and their academic environment. The intent was to provide useful information to faculty interested in pursuing a career in international accounting. For those seeking promotion, it is possible in U.S. and non-U.S. institutions to get promoted by publishing international accounting research in academic journals.

Further, many international accounting authors are full professors and have professorships at top-ranking academic institutions (Doyle and Arthur, 1995; Hasselback and Reinstein, 1995). A study of school rankings including U.S. and non-U.S. academic institutions is needed for international accounting research.

The results imply that faculty have a broad array of universities, mentors and country locations to consider when developing their career goals and research strategies. They should identify their career goals and develop mentors that align with their publication topic and methodology. Potential university affiliations should be consulted with regard to promotion and tenure research guidelines. The likelihood of publishing international accounting research in the top U.S. journals is limited and publishing in *AOS* is perhaps more probable than in the top U.S. journals.

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## NOTES

1. Quality of the university affiliation of the author is based on survey results of Hasselback and Reinstein (1995).
2. Quality journal publications are based on the empirical results of Doyle and Arthur (1995) and Brown and Huefner (1994).
3. Some articles have multiple authors and thus, an entry shows for each author in an article. 'Entries' refers to the total number of authors in each of the 1390 articles studied. For example, some articles may have two or three authors, this would be equivalent to two or three entries, respectively. This study is not designed to judge the quality of the author's research or academic institution. Therefore, equal weight is assigned to each entry.
4. Doyle and Arthur (1995) ranked U.K. schools based on the quantity of its faculty's publications in the 20 most influential journals.
5. Persistent refers to publishing in both the pre-1990 and post-1989 periods.
6. L.D. Parker's research is international because he is a non-U.S. author publishing in U.S. journals.
7. This paper does not suggest that field studies, empirical or mathematical modeling methods contribute more to international accounting research than descriptive or survey methods.

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# Research Note: The Impact of Personal Connection on Auditor Concentration

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**Key Words:** Auditor concentration; Personal connection; Family ownership

***Abstract:*** *In recent years increasing attention has been devoted to factors affecting companies' choice of auditors. Research in this area has focused on the effects of firms' attributes, typically between the larger accounting firms. However, this research has excluded entirely from its scope the impact of cultural and environmental factors in shaping decisions. This paper focuses on the impact of personal connection on auditor concentration. This phenomenon is common to many countries around the world especially Asian countries. The evidence provided in this paper shows that auditor choice is not independent of personal connections between chairmen of companies.*

Research into the determination of factors affecting companies' choice of auditors has tended to focus on the effects of firms' attributes, typically between the larger accounting firms. These attributes include: size, leverage, industrial sector and foreign operations. Research to date has excluded from its scope the role cultural and environmental factors play in shaping the decision making process of those involved in auditor selection. The decision process could be affected by the locality in which decisions are made (Baydoun and Willett, 1995). Furthermore, the bulk of the research in this area has been carried out in Western countries. There is little evidence about the more recently developed countries in Asia where many companies are characterized by unique features such as family ownership (e.g., Hong Kong) and "interlocking firm relationships" (e.g., keiretsu firms in Japan).

One aspect of culture pertinent to auditor selection suggested by Barlev (1977) and Lurie (1977) is the impact of personal connections. Lurie (1977) cited this factor as a possible variable without empirically pursuing the point. Barlev (1977, pp. 48–49) stated that "personal ties between managers and CPAs exist in 49.1% of all cases he examined" noting, however, that managers probably would not admit the connection even in a confidential questionnaire (p. 45).

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Some evidence can be deduced however from publicly available information. This paper focuses upon the chairmanship of firms in Hong Kong, which have a special significance in the context of the research question addressed in this paper. The owners of publicly listed corporations in Hong Kong often exercise control by holding Board chairmanships (Mok et al., 1992).

The quoted public company in Hong Kong is often controlled by a network of family companies, with only a minority of its voting, equity shares floated (Mok et al., 1992). It is plausible to hypothesize that cross chairmanships lead to cross auditorship. This hypothesis is tested and the results reported below. While the evidence is circumstantial, it provides some further evidence on another potentially important dimension of auditor selection.

## PRIOR RESEARCH

Studies of auditor selection have generally selected proxies that are considered to affect the agency problem[1] (Defond, 1992). Agency costs and the extent of conflict between managers and owners are difficult to observe directly. As such, these studies have used a number of attributes to proxy for the severity of the agency problem and have attempted to relate this to the demand for high quality audits. Examples of these attributes are leverage (e.g., Eichenseher and Shields, 1989), company risk (e.g., Skinner, 1993), company size (e.g., Dopuch and Simunic, 1980), the extent of foreign operations (Eichenseher, 1989), and industrial sector (Eichenseher and Danos, 1981).

Chow and Rice (1982) and Francis and Wilson (1988) have used the agency approach to examine the demand for external auditors. Barlev (1997) found that 87.5% of the managers he surveyed consulted one or more other persons in their decision to select auditors, 32.5% consulted members and shareholders and 20% consulted personal friends. Barlev suggested that "It would seem that an 'amenable' CPA would be of value to managers and companies, providing he is not known to be 'amenable' but rather to have 'personal integrity'" (p. 45). However, he found that managers indicated the existence of close ties in only 18.9% of all cases. In contrast the impact of interlocking directorates on Australian companies was examined by Davidson et al. (1984), who concluded there was a strong link between companies audited by the same public accounting firm and those having common directors (p. 316).

The evidence relating to auditor choice has generally been inconclusive with many studies showing insignificant results, for example, see Francis and Wilson (1988), Defond (1992), and Eichenseher and Shields, (1989). Francis and Wilson (1988) summarize the research as showing only a very weak association between agency cost proxies and audit firm choice with little interstudy consistency. The inconclusive results of the above literature provide the motivation for further investigation of the factors explaining auditor choice.

## THE IMPACT OF PERSONAL CONNECTION

This study was conducted in Hong Kong where family ownership of firms is predominant, The Hong Kong Society of Accountants (1997) reported that "... the majority of listed

companies in Hong Kong are subject to family or individual control by majority shareholding. However, the incidence of the major shareholder dominating (by number of directors) the composition of the Board does not appear to be significant at the entire Board level. It is more significant at the Executive Director level." This characteristic contrasts the situation in Anglo–American countries where widespread shareholders' ownership exists.[2] The structure of the accounting profession in Hong Kong is, for historical and political reasons, similar to that of the UK. Audit services at the time of this study were provided by two broad categories of firms: the largest seven (see below) and other firms. Most of the big-six firms were established in the early 1960s. These firms have grown significantly together with the impressive growth of the Hong Kong economy. The seventh big firm in Hong Kong was Kwan Wong Tan and Fong (KWTF) which was established in 1976 by local Chinese and later merged with Kwan Wong and Fong, a Shanghai-based audit firm. In the mid-1980s it affiliated with BDO the world's seventh largest international accounting firm. More recently in 1997 it merged with Deloite Touche Tohmatsu.

In terms of its audit requirements, Hong Kong law is modeled after the UK statutes. According to the Hong Kong Ordinance, Chapter 32, all incorporated businesses are required to have their accounts audited by an independent auditor. The Companies Ordinance requires external auditors to be registered and, in most cases, professionally qualified. Unlike US firms but like UK firms, Hong Kong companies are not required to disclose the reason for a change of audit (Gul et al., 1992, p. 112) nor to establish an audit committee. The responsibility for regulating the accounting profession lies with the Hong Kong Society of Accountants (HKSA), which was incorporated by the Professional Accountants Ordinance, Chapter 50, on 1 January 1973. Auditors have to be members of the HKSA and directors are responsible for the preparation of financial statements. Auditors are required to testify whether the accounts show a true and fair view and to comply with the Companies Ordinance and other laws and regulations applicable to certain industries.

The ownership structure of firms in Hong Kong is predominantly family owned. Mok et al. (1992) found that 15 families controlled 55.88% of Hong Kong's total market value as of 31 December 1989.

Of the 375 firms in the sample studied for which shareholdings could be identified (see the section Sample and Methodology) 90 had family stockholdings ranging from 20% to 75%. In 117 firms (31%) a single person had 5% or more stockholding in the firm and all cases that person was the chairman of that company. More than 55% of total local firms listed on Hong Kong stock exchange, therefore, had personal or family holding of at least 5%. In all of these cases a member of the family (in the case of the family ownership) or the person concerned (in the case of personal ownership) was the chairman of the company.

Jensen (1986) suggests that the main role of the board of directors is to act on behalf of shareholders in supervising and monitoring the action of the management, giving advice and vetoing poor production-investment decisions. In this respect auditors and directors serve as mechanisms for control and monitoring. Given the importance of audit services as a mechanism of control and given that auditors are expected to check on the compliance of the management with the accounting system, families who control companies would want to have a say in who audits the firm. It can be argued that in the absence of audit

committees the level of auditing required by the family will depend on the level of conflict of interest between the family and the management. If the interests of the family can be represented by those of its members on the board of directors (generally the chairman) the agency conflict is then reduced to a conflict of interest between the chairman and the management. It is in this context that the following null hypothesis is tested.

**$H_0$:** There is no relationship between auditor selection and cross-chairmanship in Hong Kong companies.

## SAMPLE AND METHODOLOGY

In order to test $H_0$, data on all 415 local companies listed on the Hong Kong Stock Exchange and included in Hong Kong Corporate International Handbook were collected. The total number of firms listed on the Hong Kong Stock Exchange as of November 1993 was 455. Forty firms had foreign connections and (because their auditor selection decision can be affected by their foreign connection) were deleted from the sample. Of the 415 remaining firms, it was not possible to identify the auditor of two firms. The final sample consisted of 413 firms and included the top 200 firms in terms of their market capitalization as at the end of 1992. Some variables of interest were obtained by inspecting the 1993 annual reports.

Previous studies in this area have generally classified accounting firms into two main groups: the largest, the big-six (previously big-eight) which are international in scope, and which audit the major portion of listed companies, and the second group consists of smaller firms. The rationale for this classification is based upon the argument that the large firms are perceived as suppliers of high quality opinions (e.g., Francis and Wilson, 1988). The majority of listed firms in Hong Kong (93.73%) in the sample were audited by the big-seven firms. Only 6.27% of listed firms were audited by the other group. This is a similar environment to previous research (e.g., Eichenseher, 1989).

However, the distribution of clients over audit firms in the sample varied significantly. For instance comparing Arthur Andersen and Ernst and Young, both big-six firms, the first had nine clients (2.17% at this time) and are ranked seventh among 21 audit firms, whereas the second, Ernst and Young, had 81 clients (19.57%) and was ranked second. KWTF had 60 clients (14.49%) and was ranked fourth.

Analysis of Hong Kong auditors in this context thus, suggested classifying the 21 firms in the sample into two main groups: a big-seven group versus others. The big-six were included in the big-seven group along with the local firm KWTF.[3]

## RESULTS AND DISCUSSION

In order to examine the association between cross-chairmanship and auditor selection, audit firms were classified into two categories: (1) audit firms selected by 'cross-chairmanship' clients and (2) audit firms selected by 'non-cross-chairmanship' clients.

A contingency table was set up and tested using the Chi-square test for independence of classification. A significant value for Chi-square would mean that cross-auditorship was not independent of cross-chairmanship. However, the Chi-square test of association

**Table 1.** Cross-Chairman Effects on Big-Seven Selection

| *Auditor* | *Company with no cross-chairman* | *Percentage* | *Company with cross-chairman* | *Percentage* | *Total* |
|---|---|---|---|---|---|
| Arthur Anderson | 9 | 2.31 | 0 | 0 | 9 |
| Coopers and Lybrand | 13 | 3.34 | 7 | 1.8 | 20 |
| Deloitte Touche Tohmatsu | 82 | 21.08 | 19 | 4.88 | 101 |
| Ernst and Young | 60 | 15.42 | 21 | 5.4 | 81 |
| Peat Marwick | 30 | 7.71 | 17 | 4.37 | 47 |
| Kwan Wong Tan and Fong | 42 | 10.80 | 18 | 4.63 | 60 |
| Price Waterhouse | 47 | 12.08 | 24 | 6.17 | 71 |
| Total | 283 | 72.75 | 106 | 27.25 | 389 |

*Statistics:* Chi-square; $df = 6$, value $= 11.330$, $P = 0.079$.

**Table 2.** Cross-Chairman Impact on Auditor Selection Between Big-Seven Audit Firms

| *Auditor* | *Company with no cross-chairman* | *Percentage* | *Company with cross-chairman* | *Percentage* | *Total* |
|---|---|---|---|---|---|
| Big-seven audit | 283 | 68.52 | 106 | 25.67 | 389 |
| Non-big-seven audit | 17 | 4.12 | 7 | 1.69 | 24 |
| Total | 300 | 72.64 | 113 | 27.36 | 413 |

*Statistics:* Chi-square; $df = 1$, value $= 0.042$, $P = 0.838$.

requires that the expected frequencies in all cells be at least five. To ensure this, the data was arranged in two ways. In the first, the association between cross-chairmanship and selecting an auditor within the big-seven is examined. In the second, audit firms were divided into two main groups, big-seven and others. The association between cross-chairmanship and auditor selection was tested in both cases. Table 1 shows the contingency table with the count for each cell and the results of the Chi-square test on the impact of cross-chairmanship on auditor selection within the big-seven. The results clearly lead to the rejection of $H_0$ at the 10% significant level.

Table 2 shows the contingency table with the count for each cell and the results of the Chi-square test on the association between cross-chairmanship and selecting auditor from the two groups, the big-seven and others. The full hypothesis that cross-chairmanship and auditor selection are independent in the case of the big-seven and the other groups is again rejected. This is not surprising in a country where personal connections are important.

Table 3 shows the contingency table with the count for each cell and the results of the Chi-square test on the impact of cross-chairman on auditor choice from all 21 audit firms. The results again reject the null hypothesis.

Another variable that might affect auditor selection includes auditor industrial expertise. Out of the 113 cross-chairmanship cases, there were only 13 cases where the companies cross-chaired by the same person were in the same industry. In all other case the companies were chaired by one person and were in two or more industries. The

**Table 3.** Company Cross-chairman Impact Across All Auditors

| *Auditor* | *Company with no cross-chairman* | *Percentage* | *Company with cross-chairman* | *Percentage* | *Total* |
|---|---|---|---|---|---|
| Arthur Anderson | 9 | 2.18 | 0 | 0 | 9 |
| Coopers and Lybrand | 13 | 3.15 | 7 | 1.69 | 20 |
| Deloitte Touche Tohmatsu | 82 | 19.85 | 19 | 4.60 | 101 |
| Ernst and Young | 60 | 14.53 | 21 | 5.08 | 81 |
| Edward Wan | 0 | 0 | 1 | 0.24 | 1 |
| FS Li and Company | 1 | 0.24 | 0 | 0 | 1 |
| Fan, Mitchell | 2 | 0.48 | 0 | 0 | 2 |
| Grant Thornton Byrne | 2 | 0.48 | 0 | 0 | 2 |
| HC Watt and Company | 1 | 0.24 | 1 | 0.24 | 2 |
| HL Leung and Company | 0 | 0 | 3 | 0.73 | 3 |
| KL Young and Company | 1 | 0.24 | 0 | 0 | 1 |
| Peat, Marwick | 30 | 7.26 | 17 | 4.12 | 47 |
| Kwan Wong Tan and Fong | 42 | 10.17 | 18 | 4.36 | 60 |
| MB Lee and Company | 1 | 0.24 | 0 | 0 | 1 |
| Moores Rowland | 2 | 0.48 | 2 | 0.48 | 4 |
| Nelson Wheeler | 1 | 0.24 | 0 | 0 | 1 |
| Price Waterhouse | 47 | 11.38 | 24 | 5.81 | 71 |
| Thomas Kuen | 3 | 0.73 | 0 | 0 | 3 |
| Wong, Brother and Company | 1 | 0.24 | 0 | 0 | 1 |
| Li Tang | 1 | 0.24 | 0 | 0 | 1 |
| Yangchen CPAS | 1 | 0.24 | 0 | 0 | 1 |
| Total | 300 | 72.64 | 113 | 27.35 | 413 |

*Statistics:* Chi-square; $df=20$, value=28.743, $P=0.093$.

proposition that auditors are selected on the basis of industry-expertise was not supported in this instance.

## CONCLUSION

The phenomenon of family ownership and cross-chairmanship among firms is common in some Asian countries. The evidence provided in this paper shows that Hong Kong is an instance of this type of ownership structure and provides an environment in which to study the process of auditor selection. The results provide support for the hypothesis that auditor choice is not independent of cross chairmanship under these conditions.

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## NOTES

1. Two aspects of the agency relationship which create the agency problem are the divergence in the interests and preferences of the manager and owners and the difficulties of observing the manager's action by the owners or the moral hazard problem (Jensen and Meckling, 1976).

2. It can be hypothesized that environment with widespread shareholders ownership are characterized by more extensive disclosure of accounting information than environment with tight family ownership structure. In the latter circumstances families tend to have access to inside information and they can have the accounting system they like. In this type of environment pressure for public disclosure may be insignificant.
3. Previous research using Hong Kong data has also considered KWTF as a big firm, because it audits a large portion of listed firms (e.g., Gul et al., 1992).

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# Book Review Section

The book review section is interested in works published in any language, as long as they are comparative or international in character. The author or publisher of such works should furnish either book review editor with two (2) copies of the work, including information about its price and the address where readers may write for copies. Reviews will be assigned by the book review editors. No unsolicited reviews will be accepted. Suggestions of works that might be reveiwed are welcomed.

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# Book Reviews

**Communication from the Commission on the Statutory Audit in the European Union: The Way Forward,** *(98/C 143/03), Official Journal of the European Communities, Vol. 41, May 1998, pp. 12–18. (The full text of the Communication is also available from the Europa server on the worldwide web: http://europa.eu.int/comm/dg15.)*

This document represents the European Commission's response to the replies it received to its Green Paper on "The Role, the Position and the Liability of the Statutory Auditor within the European Union" issued on July 24, 1996. The rationale for the Green Paper was that existing European Union (EU) rules did not adequately address issues arising from the role, position and liability of statutory auditors. As a result, it was felt that the divergent approaches in different Member States could adversely affect the quality of auditing, the freedom of establishment for auditing firms, and the freedom to provide auditing services throughout the Single Market.

The Green Paper launched a consultation process to establish whether there should be further EU level initiatives on statutory auditors, and, if so, what kind of initiatives. Interested parties were invited to submit their comments by October 18, 1996, and a conference on the Green Paper was held in Brussels on December 5–6, 1996. The Communication reports that: "There was general agreement at the Conference that the EU should have a common framework for auditing and that such a framework should preferably take as its base the international standards on auditing" (para. 2.7).

On January 15, 1998, the European Parliament approved a resolution broadly supporting the Green Paper. The Parliament stressed the important role of the auditor in giving credibility to companies' financial reports and also the importance of removing any barriers at a national level that may be restricting auditors' freedom of establishment and their freedom to provide cross-border services. According to the Communication, the two main issues raised by the Parliament were auditor independence and the need for new legislation. On the subject of auditor independence, the Green Paper had called for the establishment of a common core of essential principles on independence to be formulated by the profession itself. For its part, the European Parliament's resolution called for non-audit services to be defined in the context of the need for the introduction of Community rules on independence. On the issue of the need for new legislation, the Green Paper had envisaged achieving the required changes as far as possible without new legislation. The European Parliament, however, went further and asked the Commission to consider whether it would be necessary to introduce new legislation to achieve greater harmonization.

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In the Communication, the Commission still maintains its faith in self-regulation by the auditing profession, although it does state that it would not hesitate to propose new legislation where it believed it was necessary. In order to bring about change, the Communication announces the creation of a Committee on Auditing with special responsibilities for auditing matters. My inquiries reveal that the Committee on Auditing did meet in May 1998 as envisioned in the Communication. Its next meeting is in the first week of December 1998, although at the time of writing this review, the Committee has made no attempt to publicize its activities.

The Committee on Auditing comprises: government experts nominated by the Member States, representatives of bodies that elaborate auditing standards at the national level, and members of the auditing profession. The Communication sets out the four principal tasks of the Committee on Auditing as follows: (i) to review existing International Standards on Auditing and their application in an EU context to see if the application of these Standards meets the full need for auditing standards in the EU or whether there are gaps to be filled; (ii) to contribute to the work of the International Auditing Practices Committee (IAPC) of the International Federation of Accountants, including coordination of views on exposure drafts; (iii) to make proposals for improving the audit quality monitoring systems used in the Member States; and (iv) to examine a set of core principles on independence developed by the European accounting profession. The Communication also outlines five national factors that may have to be taken into account when determining future policy on auditing issues: (i) corporate governance, (ii) professional liability, (iii) professional qualifications, (iv) the freedom to provide auditing services, and (v) small and medium-sized companies. In the area of corporate governance, the Communication draws attention to the wide differences that exist in corporate structures across the Member States and the difficulties that previous efforts to arrive at a common view in this area have encountered. Another area of difference across the EU countries is professional liability, and the Communication notes that a large majority of the respondents to the Green Paper expressed the view that harmonization of the rules on the professional liability of the statutory auditor is impossible and unnecessary. However, not surprisingly, the Commission reported that it had received strong representations from the accounting profession to initiate action on this matter to ensure that different national rules and practices on liability do not create barriers between Member States and that unreasonable claims do not endanger the audit function.

On the third issue of professional qualifications, the Commission proposes to organize a closer coordination of the curricula for the training of auditors. In keeping with its self-regulatory approach, this coordination was seen primarily as a task for the accounting profession and for those who are directly involved in the educational process. The fourth issue of the freedom to provide auditing services was noted as being of particular importance to smaller firms of auditors and to individual practitioners. On the fifth issue of small and medium-sized companies, the Commission believes, and reports that responses to the Green Paper confirm, that there is no need to change the present system whereby small companies may be exempted from the obligation to have their accounts audited by a qualified professional.

Taken as a whole, the document seems well-intentioned and covers all the relevant issues. It may be rather unrealistic in its hopes for European auditing standards, as the

auditing world seems to be moving inexorably to a position of recognizing either AICPA or IAPC standards, and it is not obvious that there will be many specifically European auditing issues to be addressed. Coordinating the audit monitoring regimes of the EU countries will prove very difficult, as each country has tended to adopt its own approach without too much regard for what other countries have implemented.

One area where there may be real consequences for audit firms is that of independence and of the apparent desire of the European Parliament to divide non-audit services into those that do and those that do not impair the independence of an auditor. Given that the economic models of auditor independence tend to focus on the total fee income to be received from a client, it is not clear how such total fee income can be parceled up into different categories relating to their supposed effect on auditor independence.

The Communication rightly draws attention to the differences between EU countries in the audit area, and these are likely to provide significant barriers to any self-regulatory regime, even with the threat of governmental intervention if no solution is found. In this respect, the EU has a great distance to travel before it can begin to realize the benefits enjoyed by US auditors with only one accounting profession, albeit with different qualifications in the various states.

In the end, the process of harmonization of auditing standards is probably going to be achieved by market forces. Those companies that need to raise finance from international investors will choose a Big Five audit firm or possibly a medium-sized firm that belongs to an international network. The large audit firms are beginning the process of harmonizing their own procedures across the world, and so, it is likely that audits of international companies in the various countries of the EU will be on a similar basis without any particular push from the Commission. Hence, it is only in the area of smaller national company audits that the harmonization process is likely to have any significant impact.

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**International Accounting,** *by Paul E. Holt and Cheryl D. Hein, Dame Publications, Houston, third edition, 1998, xvii + 285 pp.*

The book has 14 chapters and two appendices containing a glossary and a list of the currencies of the world. There are end-of-chapter questions and cases. The stated objective of the book is to provide students with knowledge of recent developments in international business and international accounting. The book is written from a US perspective that compares international accounting standards and other countries' practices with those of the US. The book may even have a Southwest US focus, as it devotes a chapter to the *maquiladoras* (US-owned plants in Mexico). The authors recommend using the book for a semester course that can be offered after completion of the first or second accounting courses, or as supplemental information at any stage in the accounting curriculum. The book is written in a simple, almost journalistic style, with many anecdotes. It is written at a level appropriate for sophomores.

The 14 chapters can be divided into two groups. One group (Chapters 1, 4 and 7) covers the economic, political and social factors influencing international business and international accounting. The second group (Chapters 2, 3, 5, 6 and 8 to 14) focuses on accounting issues.

Chapters 1 and 7 are the strength of the book. Chapter 1 reports the history of accounting and standard setting in the US, and compares the US regulatory structure to those of other countries within an ethical, cultural and political context. Chapter 7 describes the free trade zone in Mexico near the US border where US multinationals have set up plants (the *maquiladoras*) that process and re-export parts and finished products back to the US. Chapter 7 discusses the tax issues related to the free trade zone and speculates on the effect of the North American Free Trade Agreement on these plants. Chapters 1, 4 (on the Bretton Woods Agreement and the development of trading areas) and 7 can be used in non-accounting courses, including continuing education courses.

The accounting chapters can further be divided into two groups. Chapters 2, 3, 5, 6 and 8 cover the similarities and differences in financial reporting across countries, and they address the questions of harmonization and international accounting standards. The other chapters (9–14) cover the usual technical accounting, auditing and tax topics. Chapters 3, 5, 6 and 8 on similarities and differences in financial reporting compare a large number of countries to the US, and cover a number of developing countries where international accounting firms and US multinational corporations have a significant presence (e.g., China and Saudi Arabia). It is worth mentioning that the book covers accounting in countries that follow Islamic economic principles. The similarities and differences are explained within the cultural and regulatory environments in those countries. This is valuable in preparing US accountants who may be assigned to those countries. The weakness is that the book sometimes exaggerates the cultural differences and/or accepts distorted perceptions at face value. Examples of such distortions are the statements about China in the case at the end of Chapter 5. In the case, it is stated that participative management would not work in China because "Chinese employees want to be told what to do," that Chinese managers do not see the need for cost control or budgeting, and that Chinese employees want the same salaries regardless of skill level and experience. These statements do not reflect the current conditions in China. There are many successful ventures by Western companies in China, many Chinese managers are trained in the West, and Chinese universities are introducing Western management and accounting concepts in their curriculum. The importance of cost control is even being practiced in government enterprises, as evidenced by plant closings and layoffs.

When discussing harmonization (in Chapter 2), the authors conclude that harmonization is untenable and they advocate increased disclosure. However, their proposed disclosure is not well developed (less than a page). Furthermore, the authors go on in other parts of the book to favorably discuss international accounting standards, especially the comparability project (E 32) of IASC. However, the information on the IASC and the setting of international accounting standards is outdated for a book published in 1998. In 1994, the IASC's Comparability/Improvements project (E 32) expanded to become its 'core standards' project at the behest of IOSCO, which receives scant two sentences of mention. Another example of outdated information is that the authors seem to be unaware that the Union Européenne des Experts Comptables Economiques et Financiers (UEC) was succeeded in 1987 by the Fédération des Experts Comptables Européens (FEE).

The chapters on accounting issues are of average quality in comparison with similar books. Chapter 10 on managerial accounting does not cover global outsourcing and supply chain management, an important issue that is of interest in academic and practice management accounting literature. The book has a case on the subject, but it is included in Chapter 2 on harmonization. Chapter 11 on international taxation covers many different taxes that are found around the world. However, in covering income taxes, it omits mentioning the differences between the worldwide tax and the territorial tax regimes. This difference has been a subject of debate, as some argue that the US worldwide system places US multinationals at a competitive disadvantage in comparison with multinational corporations based in territorial system countries. Chapter 12 on auditing has a section on auditing in Russia and the former Soviet Republics. Another section provides useful information about the problems that may face international auditing firms that propose sending women to work in Saudi Arabia.

In my view, the weakest parts of the book are the end-of-chapter cases, both in number and in quality. There are 13 short cases in the 14 chapters. Some of the cases are nothing more than a restatement of the discussion in the chapter, accompanied by questions that do not add much to the separate questions appearing at the end of the chapter. The lack of exercises, problems and quality cases may limit the use of the book in accounting courses. However, the book may be suitable for non-accounting and continuing education courses.

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**Financial Reporting in the Pacific Asia Region,** *edited by Ronald Ma, World Scientific/ Singapore Institute of Management, Singapore, 1997, xvi + 503 pp.*

*Financial Reporting in the Pacific Asia Region*, edited by Ronald Ma, offers itself as a book for "business people, accountants, and students interested in accounting and related issues in the Pacific Asia region" ( p. xi). The book is divided into three sections. The first section creates a framework for the 13 country studies contained in the second section. The third section describes some of the regional efforts towards harmonization as well as the influence of harmonization initiatives from the International Accounting Standards Committee (IASC).

The five chapters of the first section begin with a chapter that provides some background on the cultural and historical influences in the region, followed by one that describes how Chinese migration and political history has influenced regional development. The third chapter discusses the sources of economic growth for the region and the economic importance of the region. The fourth chapter relies on the Doupnik and Salter (1995) model of accounting development to discuss the influence of environmental factors on accounting practices across the region. Chapter 5 compares the standard-setting processes of the United States and the United Kingdom, as well as that of the IASC. An appendix to Chapter 5 contains a detailed summary of the IASC standards in force when the book was completed. The 13 country studies cover China, Japan, South Korea,

Taiwan, Hong Kong, Singapore, Malaysia, Indonesia, the Philippines, Thailand, Vietnam, Australia and New Zealand. A different author contributed each of the country studies; consequently, there is some variation in their organization and the detail of the coverage. Despite the variation in detail and organization, each of the country studies addresses some aspects of the country's history, the economic and political development, accounting developments, the nature of the profession, the legal setting for financial reporting, and the nature of existing accounting standards and their determination. Included in each of the country studies is a summary of major differences between the country's accounting standards and IAS.

The book's strongest contribution is its description of the historical and cultural environment of the region. In a sense, though, this is also a criticism of the book. The descriptive focus on the political, historical and economic context of the region and the countries within the region is done independently of the description of the financial reporting practices. For example, Chapter 4 discusses the influence of environmental factors on financial reporting: one of the points made in this chapter is that high levels of family ownership and cross-holdings of the publicly listed companies in Hong Kong may explain their lack of transparency (p. 63). On the other hand, Chapter 10, which covers Hong Kong, makes no reference to the nature of ownership of the publicly listed companies. The descriptive material about financial disclosure and regulation is much too general to give a student, accountant or business person any real sense of how disclosure in Hong Kong compares to other countries in the region or to Western countries.

Another general criticism of the textbook is the fact that none of the authors drew from the empirical literature to explain the nature or consequences of the existing financial reporting practices of these countries. For example, Suzuki and Wright (1985) have shown that bankruptcy prediction models common in the US have little predictive power when applied to the financial statements of Japanese firms. Ashari et al. (1994) describe the characteristics of income smoothing firms on the Singapore stock exchange. Whittred (1987) provides evidence that the extent of consolidation in Australia is in part determined by contracting requirements. Wallace and Naser (1995) provide a descriptive test of the determinants of corporate disclosure policies in Hong Kong. While these issues may be generally acknowledged in the book, the integration of the empirical research mentioned earlier as well as others would have provided a richer context for the descriptive information contained in the country studies.

A further enhancement to the book would be the addition of at least one set of financial statements from companies listed in each of the countries. The current edition contains only an excerpt of the reconciliation of BHP's Australian GAAP-basis income statement to US GAAP, a chart of accounts promulgated by the Ministry of Finance in Vietnam, the pro forma requirements for the financial statements for Thai manufacturing companies, and an extract from a forecast income statement from a listed company in Taiwan. These exhibits are interesting, but their contribution was limited as the text makes only passing reference to their significance. For example, the explanation accompanying the forecast income statement was:

> "Generally the forecast information would include a cash flow statement, an income statement and a balance sheet. The forecast information must be reviewed by a CPA

> before it is released to the public. Financial forecasts were provided by the Taiwan Semiconductor Manufacturing preceding a new issue of shares, which included a forecast cash flow statement, balance sheet and income statement. Its forecast income statement is reproduced in the Appendix at the end of the chapter." (p. 278)

The appendix material contains the forecast income statement for the year ending December 31, 1996 as well as historical data for the 1995 and 1994 fiscal years. There is no indication of what the audit for these statements involved, what assumptions were disclosed in support of the forecasts, and whether these forecasts have information content for the capital markets. The requirement for published forecasts as part of a financial reporting regime is unique. As a teacher and researcher of international accounting issues, I want more information about the importance and economic context of these forecasts.

Another significant drawback of the book is its lack of interactivity. Almost all of the issues are presented in a factual manner with little identification of issues of controversy, and few questions are asked of the readers. In this way, the country studies seem to be modeled on Ernst & Young's *Doing Business in ...* series. The political nature of accounting leads to unavoidable controversy, yet this book avoids serious discussion of the controversial issues in the region.

If someone were to ask me to recommend a reference or textbook about accounting issues in this region, I would have to direct them to *Financial Reporting in the West Pacific Rim*, edited by T.E. Cooke and R.H. Parker. The Cooke and Parker (1994) book offers more focused information for people who wish to understand the accounting practices in the region. Unlike *Financial Reporting in the Pacific Asia Region*, the Cooke and Parker book contains extracts from the financial statements of companies in every country studied in the book. The financial statements are complete enough to help the readers understand the differences in financial reporting practices across the region. For example, Hong Kong companies do not normally disclose their cost of sales. Most other countries require this disclosure. This difference becomes obvious when studying the material in the Cooke and Parker book, but I could not identify whether this issue was addressed in *Financial Reporting in the Pacific Asia Region*.

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**The Audit Society, Rituals of Verification,** *by Michael Power, Oxford University Press, Oxford, 1997, 183 pp., US$39.95.*

The author tries to understand the conditions that have made an audit explosion in Britain possible, a focus on the why and how of auditing. The first chapter has an introductory character. An audit explosion, i.e., a shift from trust to explicit checking and monitoring, within British society, together with a rise of auditing in many other fields besides financial accounting, constitutes the underlying assumption of the monograph under review. After defining the idea of audit, which includes a programmatic and a technological dimension, the author introduces the preconditions (financial auditing serves as a model), causes (demands for governance and accountability), means (an audit knowledge base that constitutes "best practice"), consequences (auditing needs to be evaluated), and prospects (ritualized practices of verification as an extreme case) of the audit society.

The analysis of tendencies towards an audit society starts in Chapter 2 by considering financial auditing which has a normative influence on auditing practices in many other fields. In the first instance, the historical development of auditing, and its origins in response to problems of control and trust, are considered, and the evolving technical base of auditing, in particular tests of internal control reliance, is addressed. Second, the argument focuses on the close association between financial auditing and the objective of preventing and detecting fraud. Thereby it is demonstrated that the gap between what the public expects — the detection of fraud — and what auditors claim to be delivering — an opinion on the financial statements — led to the development of certain audit guidance on fraud. The discussion of fraud is encompassed by the problem of audit failure. Then Power reveals that the output of the financial audit process is obscure, i.e., the cost-assurance function is unspecifiable. This obscurity can be overcome only by trust in audit judgment; therefore, reputation and image management acquire a distinctive role. Finally, it is argued that financial auditing maintains itself as an institutionally credible system of knowledge.

Not only in the financial sector but also in other areas, auditing has found itself in demand by programs for enhancing and transforming organizational governance. In Chapter 3, overlapping programs for enhanced governance and control that drive the audit explosion are considered. The first program, the "new public management," characterizes changes in the style of public administration. Auditing institutions have assumed an important role in the implementation of these changes, and "value for money" auditing has become an instrument of financial control. The second program reflects a shift in regulatory style. Regulatory initiatives increasingly utilize the cognitive and economic resources of regulated entities to ensure compliance. In particular, the internal and external

audits of control systems have begun to assume a central role in operationalizing these intentions. The Cadbury Code for corporate governance, in the UK, is considered as an illustrative example. The rise of quality management initiatives and the development of new markets and professional opportunities in assurance services (environmental auditing is considered as an illustrative example) are the third program. These three programs constitute a demand for a particular style of control in different fields. They presuppose and demand that auditing in its different forms can deliver assurance, contribute to compliance, and stimulate best practice. As in the case of financial auditing, a certain gap between what is demanded by "value for money" auditing and quality audits and their capabilities enables rather than inhibits the audit explosion.

Chapter 4 concerns the construction of an audit knowledge base that constitutes "best practice" and considers three general operational dimensions of the audit process where the social support for the authority of technical practice comes into view: sampling and risk analysis, reliance on external expertise, and the evaluation of internal control systems. The argument concentrates on the systemic significance of these three dimensions and the manner in which ideas of effective auditing are constituted through them. Whether audits work from the individual practitioner's point of view depends on the careful application of techniques. But whether audits work systemically depends on the general acceptance of these techniques as reasonable.

In Chapter 5, the manner in which auditing works is analyzed (actively creating the external organizational environment in which it operates) and a close relationship between the audit explosion and the need to install auditable performance measures is suggested. The discussion begins by considering some general criticisms of the new public management and their implications for auditing. Two extreme consequences are considered — decoupling and colonization — as a basis for assessing the effects in three different contexts: auditing within higher education and medicine, and the financial audit itself. The three cases illustrate the tension between a concept of auditable performance derived from quality assurance systems and one that is rooted in the specialist judgment and knowledge base of different service professionals, which is essentially a tension between audit and evaluation. Overall it is argued that audits work if they themselves are not too closely subject to their own values of effectiveness and that auditing needs to be evaluated rather than audited.

The final chapter argues that the fashion for auditing signifies a distinctive phase in the development of advanced economic systems as they grapple with the production of risks, the erosion of social trust, fiscal crisis, and the need for control. It explores some of the more general implications of a society that commits ever more financial and intellectual resources in auditing. The analysis is addressed in terms of four interrelated themes: democracy, surveillance, trust, and risk. The discussion starts with a consideration of the democratizing potential of audit. Even though auditing has a problematic relation to democracy, the audit society is far from being the surveillance society. The relation between ideas of surveillance, inspection, and audit is considered, and it is argued that the rise of audit represents a distinctive shift in the self-inspecting and evaluating capacity of society. This shift has important implications for trust. The audit society is only superficially a distrusting society since auditing is a practice that must be trusted and that is also itself trusting. In conclusion, it is argued that the audit explosion reflects a response to the need to process risk. In Chapter 6, the author

describes potential negative tendencies of the audit society: real risk is hidden and replaced with the financial risk faced by auditors themselves, there is a risk of relying on auditing too heavily, there are too many investments in rituals of verification at the expense of other forms of organizational intelligence, and audit threatens to become a learned form of ignorance. Finally, the author gives some speculative proposals for ways to avoid the worst of these tendencies.

The book does not tell the reader how to do auditing or how to pass an examination. In seeing in the audit explosion matters of more general social and intellectual significance, the monograph demonstrates that auditing plays an unacknowleged but fundamental role in social life. Power attempts to look beyond the financial audit into other fields (such as medicine and education). The strength of such an approach is a synoptic view; the weakness is a lack of depth. Evidence is insufficient and heavily selective. Much of the empirical material is UK-based, and it is unclear whether the arguments can be exported into other national contexts. The text is worth reading for a wider audience of practitioners (e.g., to reflect on that which they have always regarded as most concrete and secure) as well as of theorists (e.g., to stimulate future research) since it is critical, skeptical, polemical, provocative and therefore interesting. It provides a counterweight to official views, and it is very different from many other books because it raises more questions than providing answers.

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**International Financial Reporting and Analysis: A Contextual Emphasis**, *by Mark E. Haskins, Kenneth R. Ferris and Thomas I. Selling, Irwin, Chicago, 1996, xiv + 881 pp.*

This textbook is written by three US academics with the objective of meeting the needs of a US audience. Understandably, the authors consider that the globalization of financial markets promotes the need to understand the measurement and reporting process, particularly because of the implications for capital formation and the allocation process. The main aim of the book is "to explore and understand the financial reporting practices used by companies from various countries around the world" (p. iii).

While the authors do not explicitly state that the book is directed at a US audience, the text reveals this implicitly. For instance, Part III of the book considers accounting standards and practices in seven different countries, on a chapter-by-chapter basis, although there is no chapter on the US, revealing that the reader is expected to have prior knowledge in this area. The seven countries chosen are Great Britain, Germany, Japan, Sweden, Brazil, the Republic of South Korea and Italy, although no rationale for the choice is provided. Indeed, the preamble to Part III compares accounting ratios in six of those countries (Brazil is excluded) to those in the US. Interestingly, the authors state that "... each of the seven countries has a highly developed capital market". Zysman (1983) would not have described all seven as capital-market based, with Germany, the Republic of South Korea and Japan all being classified as having credit-based financial systems.

Each country chapter provides an introduction and considers environmental factors, including the business environment, selected financial reporting practices, analytical considerations, a summary, suggested readings, and substantial practical exercises on a case-study basis. The case-study practical exercises are a considerable strength of this book.

The contents of the book are classified into four parts: (I) International Financial Reporting and Standard Setting; (II) Financial Statement Analysis; (III) Accounting Standards and Practices in Selected Countries; and (IV) Harmonization of International Accounting and Reporting Standards Revisited.

Part I considers accounting in its global context, including harmonization and standardization. This sets the scene for consideration of country-specific financial reporting practices and financial statement analysis. This part considers the forces that shape financial reporting and at a very early stage Hofstede's cultural dimensions are reviewed (p. 5), but the application of this analysis to accounting by Gray (1988) is not considered in any depth, merely as a passing reference. It is noticeable that Hofstede's cultural dimensions are increasingly being considered in international accounting texts (see, for example, Roberts et al., 1998), but is culture static? If culture is static, then why do social anthropologists feel the need to update their country-specific books, e.g., *Understanding Japanese Society* by Hendry (1995)? The reality is that culture is dynamic and so Hofstede's work may no longer be timely.

Other environmental factors, such as the legal, political and business framework, are also considered in Part I. The authors believe that financial reporting practices are a function of the environment, i.e., environmental determinism (Cooke and Wallace, 1990), although no consideration is given to the notion that accounting regulatory frameworks may be a function of environmental factors, while accounting practices may be the outcome of economic events and transactions.

Chapter 2 considers harmonization of international accounting and reporting standards, and it is inevitable that, as events are moving so quickly, the chapter is somewhat dated. Nevertheless, the main issues are covered adequately. Chapter 3 covers financial reporting and the European Union, and quite rightly, in my opinion, consideration is given to the Fourth and Seventh Directives followed by a consideration of European Stock Exchanges, although the Eighth Directive is not considered. It would have been useful if Part I had included material so that the reader might appreciate the major accounting differences in the world and how these differences can be measured (e.g., the comparability index).

Part II focuses on fundamental financial statement analysis, including the problem of translating the results of foreign operations into a domestic currency. Trend and cross-sectional analysis are considered followed by a brief review of factors/events that may explain observed patterns. Further financial analysis (the du Pont approach is considered), including the evaluation of international investment opportunities, is followed by a review of special issues, including stocks, contingencies and pensions. This further analysis includes exercises involving 20-F filings and also accounting for foreign operation.

Part III considers accounting standards and practices in the countries mentioned earlier in this review. The introduction to this Part contrasts accounting ratios in the countries reviewed (with the exception of Brazil) with those in the US, based on Compustat data for the fiscal year 1993. Interestingly, South Korea had the lowest quick ratio, interest coverage ratio and return on assets and the highest inventory turnover. The

chapter on Great Britain is interesting to read, although the authors stray occasionally into Americanisms, e.g., corporation law instead of companies acts. The influence of the UK in the development of accounting is noted in the introduction, although membership of the G4+1 is not mentioned. From a cultural perspective, the US and the UK are very similar, particularly in terms of Hofstede's cultural dimensions. Linking this to accounting, the authors note that the treatment of goodwill differs fundamentally between the two countries, a fact highlighted in most 20-F reconciliations by UK companies as the most significant difference in terms of impact on profits and shareholders' equity. The difference between the two countries has been substantially reduced by the introduction of Financial Reporting Standard 10 in the UK on goodwill and intangible assets. Other differences remain principally in the treatment of deferred taxes, inventories, pension costs and revaluations.

The chapter on Germany rightly points out that German accountants and auditors are among the world's most highly trained. German accounting is more legalistic and changes less rapidly than in Anglo-American countries. The role of the banks is recognized not only in providing loans but also in terms of equity investment, with the implication that the banks have access to inside information and therefore do not rely on published financial statements. This is a major explanation why German financial reporting is not as extensive as in many Anglo-American countries.

Chapter 10 considers Japan. The introduction notes the influence of Germany on Japan's Commercial Code 1899 (the Code actually dates from 1890 but the 1899 revision was substantial) and the US-influenced Securities and Exchange Law of 1949. External influences are substantial but internal factors are also significant, not least the existence of the *keiretsu*. What does not come across in the chapter is the existence of multiple sets of financial statements in Japan for larger enterprises. One set of financial statements complies with the Commercial Code (low level of disclosure), another is based on the Securities and Exchange Law (much more extensive disclosure), and for major companies a third set of financial statements is based on Japanese perceptions of what an international reader (US) would expect to see. Consequently, the third set may be in US format based on Japanese GAAP at the one end of the spectrum and on US GAAP at the other end. Not mentioned in this chapter is that Japan is moving towards implementation of international accounting standards by the year 2000 or one year later. In addition, no mention is given to the problem of non-consolidated subsidiaries, a practice that can be abused.

The chapter on Sweden is accurate, and consideration is given to the corporation in society. The importance of tax is illustrated as well as the use of allocations to smooth income and business cycles. International trade and stability are of great importance to Sweden. In contrast, the chapter that follows considers Brazil, which has an economy that is relatively closed in many respects but with changes occurring. Historical cost is modified because of very high rates of inflation in order to make accounting information useful.

Chapter 13 on South Korea rightly considers the role of the *chaebol*, making the point that "for all their size and sophistication, the *chaebol* have not yet distinguished themselves for detailed and helpful financial reporting" (p. 736). It is my understanding that non-consolidation is a great problem, particularly when a subsidiary is debt-laden. This point does not emerge in the chapter.

Chapter 14 focuses on Italy and follows the same format as the other country studies. Weak government has made the move to harmonize a difficult process, particularly in

relation to the Seventh Directive, because of the lack of familiarity with consolidations. The final chapter is entitled "Harmonization's Future" and is brief with an introduction, alternatives to IASC, and Outlook. Appendix I provides a useful summary of comparative accounting practices in 10 countries and one province not covered elsewhere in the text, and this is followed by the glossary and index.

Overall, the book fulfills its objectives and provides contextual emphasis. The emphasis on financial statement analysis, including plenty of examples, is also useful. The weakness or limitation of the book is that it is designed for a US audience with a limited knowledge of the academic literature outside the US. The authors have made efforts in this direction (many major US journals totally ignore the literature outside the US!), although too often they refer to articles in the professional press rather than the academic literature.

Reviewed by Terry Cooke
University of Exeter
Exeter, UK

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**Accounting Services and Growth in Small Economies: Evidence from the Caribbean Basin,** *by David L. McKee, Don E. Garner and Yosra AbuAmara McKee, Quorum Books, Westport, Connecticut, 1998, xi + 147 pp., US$59.95.*

This book sets out to analyze the impact of accounting services on the potential for growth of Caribbean economies, particularly facing the move towards a global economy. Within this goal, the authors set as their objective the identification of specific elements in the Caribbean basin that have significant potential for impacting the region in a positive way. The book is divided into four parts. Part I presents some general comments about the role of services in general and accounting services in particular as facilitators of growth and trade, before moving on to specifics about services offered by some accounting firms in the Caribbean.

Part II offers more details about the services of selected firms in several Caribbean jurisdictions. Part III gives some details about the legal and accounting environment in some countries of the region, while Part IV summarizes the first three parts.

To be fair, this book contains a great deal of material. From this perspective, it is useful to readers who are being introduced to the region, although the material presented is flawed in certain aspects, and this results in a view of the region that is not fully consistent with reality. As a whole, the book fails to connect the specific situations of the jurisdictions considered with the levels of growth achieved or achievable, thus stopping short of proving the very point it tries to make.

The assertions in the previous paragraph will now be supported by this reviewer. We consider the material presented as flawed because some information offered is obsolete, some other is not truly representative of the region, and still other is incorrect or misleading.

Many comments could be offered about Part I, which includes the first three chapters. Chapter 2 deals with services in general and their linkage to growth, and it is quite good. Chapters 1 and 3, however, fail to win over the reader. The first has over 80 direct quotations in only eight and a half pages, mostly from earlier works by the authors themselves. This strongly tries this reader's patience. Chapter 3 contains mostly self-laudatory statements made by some firms in their promotional brochures. Some of this material is dated as far back as 1994, and the quotes from the chairman of one firm are from a man who has been out of office since early 1997. No mention is made of the most outstanding event to hit international firms in this decade, the merger of PricewaterhouseCoopers, and how it may impact services rendered in the region. This is where some of the obsolete and incomplete information is presented. Part II summarizes services offered by selected firms in selected jurisdictions. In some cases, the firms selected are not the largest or most important ones in the jurisdictions mentioned. Also, in this section the authors use four pages to describe the services offered by Price Waterhouse in France and suggest that they may be available in the French Caribbean. This hardly aids the reader in visualizing the real situation in the French Caribbean and is, therefore, incomplete and not representative of the region. The rest of this section mostly summarizes the services offered by only two firms in the region, with almost total silence about the other firms, thus resulting in an incomplete view. The authors decided to include Mexico, Colombia and Venezuela as representatives of the Spanish-speaking Caribbean. Very few people in the Caribbean would consider these countries to be part of the region, although they do have a Caribbean coast. Their economies, which have a large component of heavy industry, differ greatly from those of the Caribbean countries, which have negligible industry. Also, their focus lies somewhere else, as the Caribbean is not a large enough market for them. Mexico's interest lies in NAFTA, Colombia's in the Andean region, and Venezuela's in purchasers of its oil. The book gives practically no consideration to Cuba and the Dominican Republic, the largest Spanish-speaking countries in the region, which account for over 18 million Caribbean souls. Neither does it consider the situation in Haiti, the largest French-speaking country, with over 8 million people. These three countries have a total population which is many times the population of all the rest of the true Caribbean combined, yet the reader is hardly made aware of their importance. For these reasons, this part of the book is not truly representative of the region.

Part III summarizes the legal and accounting environment in some countries. It reads like an abridged *Doing Business in ...* brochure for the selected jurisdictions, with little input from the authors. Of special concern is the fact that, in more than one instance, reference is made to the common presentation of the Statement of Changes in Financial

Position as a basic financial statement and to the required accounting practice of charging declared and unpaid dividends in the income statement. The trend in most jurisdictions is to present the Statement of Cash Flows in lieu of the Statement of Changes in Financial Position. Also, all jurisdictions require that dividends be charged to undistributed earnings. Although changes in this account may be presented below net income at the bottom of the income statement, this is very different from what the reader may infer from phrases such as "Dividends that are proposed are taken into the profit-and-loss statement and set up as a liability" (p. 67) or "Dividends are commonly charged in the income statement with a related increase in liabilities where not yet paid" (p. 85). Therefore, the statements made are incorrect or, at best, misleading.

Part IV contains nothing new and only repeats in summarized form the contents of the first three parts. There is plenty the authors could have addressed that would have made this book a better contribution. Among these are the impact of the major firms in developing the local professions, the benefits obtained from training received by local accountants who then move on to set up their own national firms or to occupy high positions in business and in government, the improvement in accounting practices by businesses that were forced by their audit firms to use proper accounting principles, the creation of local institutes under the leadership of accountants from the large firms and with the support of the firms, the drafting and implementation of Codes of Ethics for professional accountants at the insistence of these same accountants and firms, and the creation of strong ties, fostered by accountants from the large firms, with institutes from other countries, such as the ACCA in Great Britain, which have been instrumental in helping the local professions grow and develop, only to name a few. All of these accomplishments have greatly improved the credibility of the countries of the region in the eyes of foreign lenders and investors. None of these aspects was emphasized in this book. Some were only mentioned in passing. Most others were not addressed at all. But the *coup de grace* is the fact that, in not a single case, was the level of economic growth — or lack of it — of any country measured and connected to the availability of good accounting services. Neither is the potential for growth assessed as a result of available services. This is, after all, the title of the book. The reader is left to his or her own devices to try to draw conclusions in this respect, but this is impossible, as no growth or development figures are presented or hinted at for any country. After presenting all that information, some good, some flawed, the book simply summarizes itself in Part IV and ends by leaving the reader in the air without making a point. A sad ending to an auspicious start.

Reviewed by Juan R. Herrera
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Santo Domingo, Dominican Republic

# Capsule Commentary

**Significant Differences in GAAP in Canada, Chile, Mexico and the United States,** *A Joint Study by the Canadian Institute of Chartered Accountants, Colegio de Contadores de Chile, Instituto Mexicano de Contadores Públicos, and the Financial Accounting Standards Board of the United States, CICA, Toronto, 1998, 145 pp., Can$32.50.*

This is a further update of the 1995 publication, *Financial Reporting in North America*, which covered the US, Canada and Mexico. It provides an excellent comparison of accounting standards in the four countries, prepared by representatives from the staffs of the four cooperating accounting bodies and coordinated by the Canadian Institute of Chartered Accountants. This latest revision brings the comparisons up to date through June 1998.

All but 15 pages are devoted to detailed, country-to-country comparisons arrayed under three headings: comprehensive differences, differences affecting the income statement, and differences affecting the balance sheet. In two useful sections at the front, the authors trace recent and ongoing developments in progress toward financial reporting harmonization among the four countries. An interesting disclosure is that both Chile and Mexico have a "suppletory" rule that prescribes the use of the applicable International Accounting Standard in instances where the country has not issued a general GAAP standard.

Translations into Spanish and French are currently being prepared.

S.A.Z.

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# THE INTERNATIONAL JOURNAL OF ACCOUNTING

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## ARTICLES

## BOOK REVIEWS

The International Journal of Accounting

# The Comprehensiveness of Cash Flow Reporting in the United Kingdom: Some Characteristics and Firm-specific Determinants

**R.S. Olusegun Wallace,* Mohammed S.I. Choudhury,† and Ajay Adhikari‡**
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**Key Words:** UK Cash flow reporting; Comprehensiveness; Firm-specific determinants; Free cash flows; Direct versus indirect method of presentation of operating cash flows

***Abstract:*** *We report the results of a study of the characteristics and comprehensiveness of disclosure in cash flow statements (CFSs) published in the 1995 annual reports of UK firms and their relationships with selected firm-specific characteristics. Based on the data from a sample of 200 firms, our results suggest that the comprehensiveness of cash flow reporting is (1) an increasing function of firm size (however defined) and (2) a decreasing function of return on sales. There are significant differences in cash flow reporting comprehensiveness among industrial groups and between positive and negative net cash flows firms. However, our results also suggest that cash flow reporting comprehensiveness is not associated with net cash flow per £ worth of equity, liquidity, leverage, and the number of foreign enterprises.* ***Data Availability:*** *The data used in this study were obtained from the annual reports of sample firms and* ***Times 1000****.*

The purpose of our paper is three-fold: to examine the cash flow information in the annual reports of a sample of large UK firms listed on the London Stock Exchange so as to identify some of its characteristics; to measure the comprehensiveness of cash flow reporting by these firms so as to extend the literature on disclosure comprehensiveness to this aspect of corporate reporting; and to investigate whether that comprehensiveness can be explained by some characteristics specific to those firms. There are several reasons for our interest in the characteristics and in the comprehensiveness[1] of the cash flow information in corporate annual reports of UK firms. The first reason arises from our desire to contribute to the literature on the comprehensiveness of corporate reporting because there is little or no information in that literature on the comprehensiveness of cash flow reporting. The second reason is that information on the characteristics of cash

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flow information released by UK firms may help in our understanding the cash flow reporting behavior of US firms, since the accounting standards on cash flow statements (CFSs) issued in the two countries are similar in several material respects. The third reason is based on the belief by some regulators (e.g., Accounting Standards Board's [ASB's] FRS1 [Revised 1996] paragraph 1[b]) that the CFS is useful in the assessment of liquidity, solvency and financial viability of reporting companies. For example, the potential of a firm to improve the trading liquidity of its stocks and the future earnings of its investors through its positive cash flows and the appropriateness of its cash position impacts directly on the firm's value. In addition, a poor cash position often draws attention to the firm's going-concern status and an excessive cash position may expose the firm to the risk of a takeover. Consequently, we believe that the provision of information on the cash flows and cash position of a company in its annual report plays an important role in the analysis of the financial position of that company and generates larger absolute price and volume reactions to that company's securities in the stock market (Atiase, 1985, 1987; Bamber, 1986, 1987).

Nowhere in the literature on cash flow reporting is there a report on a study of the comprehensiveness of cash flow information released by corporate reporters in their annual reports, despite its practical importance and recent popularity.[2] Our paper seeks to correct this anomaly by reporting on the results of an investigation of the comprehensiveness of the content of CFSs published by a sample of UK firms in 1995 and how this comprehensiveness relates to firm-specific characteristics. In measuring comprehensiveness, we focused more on the details provided on the items included in the CFSs and gave credit to the density (fullness) of information on each of the items which make up the index of cash flow reporting (Wallace et al., 1994, p. 41). We used rank regression procedures to relate cash flow reporting indexes to some characteristics of the firms in our sample. Our results suggest that there is more (rather than less) disclosure of cash flow-related information when a firm is large (rather than small), has higher (rather than lower) proportion of total revenue attributable to foreign segments, has lower (rather than higher) returns on sales and has net negative (rather than net positive) cash flows.

The remainder of our paper is organized into six sections. The next section provides a brief historical development of cash flow reporting framework in the United Kingdom and describes some observable characteristics of cash flow reporting in the country as a background for the rest of the paper. Section 2 provides a theoretical basis for examining the association between selected financial characteristics and the comprehensiveness of cash flow reporting by UK firms. The third section describes the procedure for measuring cash flow reporting comprehensiveness. The research methodology embracing data and the estimation models is described in Section 4. The results are presented in section 5 and the conclusion is provided in the final section.

## HISTORICAL BACKGROUND AND SOME OBSERVABLE CHARACTERISTICS OF CASH FLOW REPORTING

The inclusion of CFSs in corporate annual reports in the UK was required by the ASB from the financial years ending on or after March 23, 1992 following the release of Financial Reporting Standard (FRS) no. 1 in September 1991. Previously, UK firms were

**Table 1.** XYZ Limited. CFS for the Year Ended 31 March 199x

| | | |
|---|---|---|
| | £'000 | £'000 |
| Net cash inflow from operating activities | | 6889 |
| Returns on investments and servicing of finance | | |
| Interest received | 3011 | |
| Interest paid | (12) | |
| Dividends paid | (2417) | |
| Net cash inflow from returns on investments and servicing of finance | | 582 |
| Taxation | | |
| Corporation tax paid (including advance corporation tax) | (2922) | |
| Tax paid | | (2922) |
| Investment activities | | |
| Payments to acquire intangible fixed assets | (71) | |
| Payments to acquire tangible fixed assets | (1496) | |
| Receipts from sales of tangible fixed assets | 42 | |
| Net cash outflow from investing activities | | (1525) |
| Net cash inflow before financing | | 3024 |
| Financing | | |
| Issue of ordinary share capital | 211 | |
| Repurchase of debenture loan | (149) | |
| Expenses paid in connection with share issues | (5) | |
| Net cash inflow from financing | | 57 |
| Increase in cash and cash equivalents | | 3081 |

Notes to the cash flow statement

(1) Reconciliation of operating profit to net cash inflow from operating activities

| | |
|---|---|
| | £'000 |
| Operating profit | 6022 |
| Depreciation charges | 893 |
| Loss on sale of tangible fixed assets | 6 |
| Increase in stocks | (194) |
| Increase in debtors | (72) |
| Increase in creditors | 234 |
| Net cash inflow from operating activities | 6889 |

(2) Analysis of changes in cash and cash equivalents during the year

| | |
|---|---|
| | £'000 |
| Balance at 1 April 1991 | 21 373 |
| Net cash inflow | 3081 |
| Balance at 31 March 1992 | 24 454 |

(3) Analysis of the balances of cash and cash equivalents as shown in the balance sheet

| | 1992 £'000 | 1991 £'000 | Change in year £'000 |
|---|---|---|---|
| Cash at bank and in hand | 529 | 681 | (152) |
| Short-term investments | 23 936 | 20 700 | 3236 |
| Bank overdrafts | (11) | (8) | (3) |
| | 24 454 | 21 373 | 3081 |

*(continued)*

**Table 1.** (Continued)

| (4) Analysis of changes in financing during the year | Share capital £'000 | Debenture loan £'000 |
|---|---|---|
| Balance at 1 April 1991 | 27411 | 156 |
| Cash inflow/(outflow) from financing | 211 | (149) |
| Profit on repurchase of debenture loan for less than its book value | | (7) |
| Balance at 31 March 1992 | 27622 | – |

*Source:* Accounting standards board (September 1991) FRS 1 — cash flow statements, illustrative example for a single company given on pages 28–29.

expected to provide a funds flow statement in line with the framework suggested by the Statement of Standard Accounting Practices (SSAP) no. 10 on the statement of source and application of funds issued in 1975. The 15-year experience with the funds flow statement suggests that the statement has failed to pin-point aspects of a firm's financial liquidity and viability that are crucial in the decision of whether or not one should continue to invest one's resources (however defined) in the firm (ASB, 1996, 56 paragraph 5).

Although FRS 1 was the first standard released by the ASB, the exposure draft (ED 54) that provided the basis for the standard was issued by the Accounting Standards Committee (1990) which was in charge of setting accounting standards prior to the formation of the ASB. While FRS 1 has retained much of the framework for cash flow reporting suggested in ED 54, it introduced two significant changes: (1) the addition of two new categories to the proposed three categories of cash flows — returns on investments and service of finance, and taxation and (2) the exemption of a large number of reporting entities from preparing CFSs (Ghosh, 1996, p. 8). The ASB's objective for expecting the content of CFS to be reported under five headings (see Table 1 for an example of the CFS issued by UK firms) is to ensure that cash flows are reported in a form that highlights the significant components of cash flow and facilitates comparison of the cash flow performance of different businesses (FRS 1 [1991] paragraph 1).

FRS 1 (1991, paragraph 1) expected CFSs to give information on cash generated and absorbed by a reporting firm and on changes in its liquidity, but was not particularly helpful to both preparers and users by the way it defined the cash that should form the basis of the CFS. The definition of that "cash" included what FRS 1 describes as *cash equivalents* which essentially are short-term, highly liquid investments which are readily convertible to known amounts of cash without notice and which are within 3 months of maturity when acquired. This definition suggests that cash equivalents should be subject to insignificant risk of changes in value and should exclude investments with more than 3 months to maturity on acquisition and long-term securities whose time to maturity has fallen to 3 months or less at the balance sheet date (Wallace and Collier, 1991, p. 49). The 3 months to maturity cut-off is arbitrary and has a short-term perspective which was not descriptive of the prevalent long-term focus of treasury management and the intended goal of assisting users in the assessment of a firm's liquidity and long-term financial sustainability. FRS 1 (Revised 1996) was issued to deal with these and other observed problems concerning the way that cash flow reporting operated since the issue of the original FRS 1.

**Table 2.** Population of Sample Firms by Industry-type and Method of Reporting Operating Cash Flows

| | *Methods of reporting operating cash flows* | | | | |
|---|---|---|---|---|---|
| | *Indirect method with reconciliation* | | | | |
| *Industry* | *A* | *B* | *C* | *Direct method* | *Total* |
| Manufacturing | 85 | 8 | 1 | 0 | 94 |
| percentages | 90.43 | 8.51 | 1.06 | 0.00 | 100.00 |
| Service | 48 | 6 | 2 | 1 | 57 |
| percentages | 84.21 | 10.53 | 3.51 | 1.75 | 100.00 |
| Trading | 30 | 4 | 1 | 1 | 36 |
| percentages | 83.33 | 11.11 | 2.78 | 2.78 | 100.00 |
| Conglomerate | 10 | 2 | 1 | 0 | 13 |
| percentages | 76.92 | 15.38 | 7.69 | 0.00 | 100.00 |
| Total | 173 | 20 | 5 | 2 | 200 |
| percentages | 86.50 | 10.00 | 2.50 | 1.00 | 100.00 |

Notes relating to indirect method of deriving cash flow from operations: A = reconciliation outside the CFS but in the general notes to accounts. B = reconciliation outside the CFS but nearer to it and not in the general notes to accounts. C = reconciliation on the face of the CFS.

Direct method = the direct method of presentation showing cash flow from customer collections and cash paid to suppliers, employees and other outside entities for goods and services received in the pursuit of normal trading and operating activities.

## Some Observable Characteristics of Cash Flow Reporting in the United Kingdom

In this sub-section, we describe three anomalies in cash flow reporting. Some of these anomalies (such as, the disclosure of some but not all of the user-relevant information that could be released) arise from the choice which the former cash flow reporting standard (FRS 1) permitted. For example, FRS 1 permitted corporate reporters to choose between the direct method and the indirect method of reporting operating cash flows (OCFs). The three illustrations now follow.

### *Preference of the Indirect Method over the Direct Method of Reporting OCFs*

As Table 2 reports, only two firms (one from the service sector and the other from the trading sector) presented information relating to OCFs, using the direct method. About 87% of the firms in the sample (i.e., 173 of the 200 firms) presented information on net OCFs, using the indirect method and included the reconciliation of net profit to the net cash flow from operating activities in notes to the financial statements. Twenty firms (10%) using the indirect method provided the reconciliation statement immediately after the CFS. Only five of the firms in the sample included the reconciliation statement within the CFS.

The revelation that only two of the 200 firms in our sample adopted the direct method supports the findings of Wallace et al. (1997, p. 11) that there is a universal low adoption of the direct method in countries which permitted a choice between both methods. This finding leads us to conclude that when corporate reporters are allowed discretion, they often do not prefer to adopt the one that is perceived as beneficial to end users and/or considered by them as costly to implement (Wallace et al., 1997, p. 11) in terms of data

gathering and competitive disadvantage. This apparent preference for the indirect method calls in question the relative superiority of the direct method over the indirect method. As Wallace et al. (1997, p. 8) explain, advocates of the indirect method often argue that the method is more informative than the direct method because it (a) emphasizes the build-up (or liquidation) of debtors (or creditors, stocks, etc.), thus explaining the difference between net income and OCFs and (b) keeps management honest, that is, reduces the ability of management to manipulate the income statement numbers without it being noticed by report users. In addition, it is argued (Seed 1984; Thompson and Buttross 1988) that the indirect method articulates the CFS with the balance sheet and the income statement and is more of an arithmetic proof of net operating profit figure[3] than it is a statement of cash flows. In contrast, proponents of the direct method of presenting the OCF argue that the method (1) provides a user-friendly format for readers not possessing substantial accounting knowledge because it represents an entity's operating cash flows in the manner that is clear and understandable to a non-sophisticated reader (O'Leary, 1988); (2) offers users an opportunity (at least once a year) to compare similar types of cash receipts and payments across firms (Richardson, 1991); and (3) facilitates comparison of actual cash flows with cash budget and helps to explain variances in cash flows (Trout et al., 1993). The continued support of the indirect method by both standard setters and preparers seems to us a functional fixation to the days when the funds flow statement was in vogue (see also Cottle et al., 1988, p. 242).[4] The case for a possible replacement of the indirect method by the direct method in the United Kingdom, as was done in Australia and New Zealand, is not helped by the recent reaffirmation by the ASB (1996, p. 65) of its earlier position on the matter (ASB, 1991, 22 paragraphs 70 and 49, paragraph 5):

> In developing FRS 1 the Board considered the respective merits of the so-called "direct" and "indirect" methods for reporting net cash flow from operating activities. The principal advantage of the direct method is that it shows operating cash receipts and payments. Knowledge of the specific sources of cash receipts and purposes for which cash payments were made in past periods may be useful in assessing future cash flows. However, the Board noted that it did not believe that in all cases the benefits to users of this information outweighed the costs to the reporting entity of providing it and, therefore, did not require the information to be given. The Board remains of this view, and the FRS continues to encourage the direct method only where the potential benefits to users outweigh the costs of providing it.

However, preparers' costs of collecting, aggregating and disclosing information on cash flows and the users' cost of processing the released information for decision making are difficult to observe and were not factored into our analysis, though such costs may affect the type and details of the released information.

### *Non-articulation of OCFs with Differences between Opening and Closing Working Capital Components*

FRS 1 (1991) required corporate reporters to disclose separately, in their reconciliation of net OCFs to net results from the profit and loss statement, movements in stocks, debtors

and creditors related to operating activities and other differences between cash flows and profits and the differences between dividends received and results taken into account for equity accounted entities. Although not included in our scoring (discussed below), we investigated whether we could trace the items in the reconciliation statements to the differences between the opening and closing balances of the components of working capital, but not changes in fixed assets, since these do not relate to operating but investing activities. We discovered, surprisingly, a tremendous variance between the entries in the reconciliation statements and the relevant differences between the opening and closing balance sheet figures. For example, in the 1995 Annual Report and Accounts of Vickers (Vickers, 1995), the following non-articulations were found:

| | CFS Reconciliation Amount £m | Balance Sheet Difference £m |
|---|---|---|
| Stock in work-in-progress | 11.4 | 27.2 |
| Debtors | (30.0) | (17.0) |

This prevalence of irreconcilable OCF reconciliation items is disappointing, especially because FRS 1 (1991, paragraph 44) required corporate reporters to provide sufficient details of several balance sheet amounts or parts thereof, that are combined to permit a reconciliation. This revelation is in line with the results of a US study (Bahnson et al., 1996) of the non-articulation of the items in the reconciliation of net OCFs to net operating profits with the differences between the opening and closing balances of working capital components.

### Reporting of Free Cash Flow

We discovered an emerging practice of reporting an item described as *free cash flow.* The ASB reported that it was requested by several interest groups, during its consultation on FRS 1 and its exposure of proposals suggesting changes to FRS 1 (ASB, 1995 *Financial Reporting Exposure Draft* (FRED) No. 10), to require the CFS to highlight the free cash flows of an entity (FRS 1 (Revised 1996) p. 62 paragraph 14). The conceptual definition of *free cash flow* is uncommitted net OCFs, that is, those that can be distributed to shareholders without affecting current level of growth, the market value of the firm (beyond the cash decrease) and the firm's ability to take advantage of new business opportunities. Jensen (1986, p. 323) defines *free cash flow* as cash flow in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital. While the ASB (1996) does not suggest how to determine an entity's *free cash flow,* it suggests that a key issue in that definition is to distinguish cash flows for the maintenance of operating capacity from cash flows for expanding that capacity. While the reporting of *free cash flow* is a nascent feature in the United Kingdom, the emerging practice is to adjust net OCFs by deducting (adding) expenditures for the purchase (sale) of tangible fixed assets made by the firm. One firm *Grand Metropolitan,* defined *free cash flow* in its 1994 annual report (Grand Metropolitan, 1994, p. 27) as "cash available for the payment of dividends, net of acquisitions and financing items." The 1995 annual

report of Guinness (1995, p. 65) provides an illustration of a corporate reporting policy on this construct:

> The Group's free cash flow before dividends comprises the net cash inflow from operating activities and dividends received from associated undertakings less net interest payments, dividends paid to minority shareholders in subsidiary undertakings, net tax payments and net purchases of tangible fixed assets.

However, it is difficult for the user of CFSs to verify whether some of these capital expenditures are excessive and whether the excess (or free) cash could be distributed to the shareholders without affecting future growth. In addition, some of the payments for continuing operations may be discretionary and could have been distributed to shareholders without affecting the firm's growth potential.

Twenty-two of the 200 firms in our sample referred to *free cash flow* in their annual report and accounts. Some of them only used the term in their Operating and Financial Review, giving a figure that they describe as the *free cash flow* which the firms had produced in the year without specifying the make-up of the figure. One firm even described its 1995 net OCFs as *free cash flow.*

## LITERATURE REVIEW, INDEPENDENT VARIABLES AND TESTABLE IMPLICATIONS

There is little or no information in the accounting literature on the association between firm-specific characteristics and the comprehensiveness of cash flow reporting (see Neil et al., 1991). Early research on cash flow data was concerned with arguing for the introduction of cash flow reporting (e.g., Lee, 1972). More recent research on cash flow reporting is concerned with the regulatory framework for cash flow reporting (Wallace et al., 1997), the perceived usefulness of such information in decisions made by investors and analysts (Lee 1981; Jones et al., 1995; McEnroe, 1996), the inconsistencies and ambiguities in CFSs released by US firms (Nurnberg, 1993; Nurnberg and Largay, 1996; Bahnson et al., 1996), the prospect of using cash flow numbers to analyze corporate performance (Giacomino and Mielke, 1988; Mielke and Giacomino, 1988) and predict future cash flows and corporate failures (Largay and Stickney, 1990; Bahnson and Bartley, 1991; 1992), and the value-relevance and predictive value of cash flow data (Wilson, 1987; Aziz and Lawson, 1989; Bernard and Stober, 1989; Charitou and Ketz, 1990; Jennings, 1990; Livnat and Zarowin, 1990; Lorek et al., 1993; Lorek and Willinger, 1996; Ali, 1994; Finger, 1994; Cheng et al., 1996; 1997). We believe that the prospect of using cash flow numbers to analyze corporate performance and to predict future cash flows and corporate failures would be more enhanced if the CFS is comprehensive than if it is not.

The motivation for the current study is, therefore, drawn from the literature concerned with investigating the association between specific characteristics of firms and the comprehensiveness of the financial disclosure in the firms' annual reports. This literature provides contradictory evidence on the nature and direction of the relationships among firm-specific characteristics and the comprehensiveness of corporate annual reports. However, knowledge of such relationships is useful to the individual investor, the

investment community at large, corporate reporters and regulators of the content of corporate annual reports. If differences in the comprehensiveness of disclosure by firms can be traced to differences in the firms' characteristics, then there may be a need to factor such firm-specific differences into any decision on the comprehensiveness of corporate reporting.

## Independent Variables and Testable Implications

The salient research question, in this part of our study, is whether there are identifiable firm-specific characteristics that are associated with the comprehensiveness of cash flow reporting in the United Kingdom. To operationalize this question, we propose 12 firm-specific characteristics as the independent variables and classify them for analytical purposes, following Lang and Lundholm (1993), Wallace et al. (1994) and Wallace and Naser (1995), into three non-mutually-exclusive categories: structure-related, performance-related, and market-related and multinationality variables. The relationships between each of these three categories of firm-specific characteristics and indexes of comprehensive cash flow reporting are theorized below.

### *Structure-related Variables*

Structure-related variables refer to five firm-specific characteristics, each of which is a proxy for firm size. These variables are total assets, total sales to external parties, market capitalization, number of employees and leverage (total liabilities divided by book value of equity adjusted for goodwill).[5] Following the practice in many disclosure studies, we suggest that corporate reporting comprehensiveness is an increasing function of firm size (see Cerf, 1961, pp. 31–32; Buzby, 1975, p. 24; Firth, 1979, p. 131; Chow and Wong-Boren, 1987, p. 539; Wallace, 1987, p. 575; Cooke, 1989, p. 118; 1991, p. 176; Imhoff, 1992, p. 105; Malone et al., 1993, p. 253; and Hossain et al., 1994, p. 342) and leverage (Wallace et al., 1994, p. 44; Wallace and Naser, 1995, p. 321).

We are, however, equivocal about the theoretical basis of the direction of the association between firm structure variables and indexes of comprehensive disclosure. There are strong arguments for assuming that the index of comprehensive cash flow reporting may be both an increasing and a decreasing function of firm structure (size and leverage). For example, the fear of political action and competitive disadvantage that may arise from the release of highly comprehensive corporate reports and the visibility which may arise from large firm size or high leverage may result in corporate reporters not wanting to provide more detailed cash flow reporting (Jensen and Meckling, 1976, p. 36; Zimmerman, 1983, pp. 144–145; Dye, 1985a, pp. 124–41; 1985b, p. 545; Watts and Zimmerman, 1986, p. 235; Wallace et al., 1994, p. 44; Wallace and Naser, 1995, pp. 321–323). Empirical evidence on the role of predisclosure information on the responsiveness of security prices to the release of information (such as earnings announcements) has also suggested that smaller firms and low leverage firms are likely to have a better security price response to their release of information because the market often has less predisclosure information for these firms (Atiase, 1985, p. 22).

The preceding argument notwithstanding, our hypothesis is that large and/or high leverage firms are more likely to provide cash flow information in a more detailed manner than small and/or low leverage firms would do. The consequence of a firm's size or leverage rising to a relatively high level is the need for external capital to finance its growth and the large following of analysts (Lang and Lundholm, 1996), lenders, investors, customers, suppliers and scholars of financial reports interested in its activities and performance. As a result, there is a higher public demand for information about its activities.

### *Performance-related Variables*

Performance-related variables factored into our analysis include return on sales (measured by earnings before interest and taxation divided by total sales to external parties), return on equity (net income divided by book value of equity adjusted for goodwill), liquidity ratio (current liabilities divided by current assets), earnings per share (earnings per £ worth of shares) and net cash flow per share (net cash flow divided by the £ worth of outstanding issued shares). Apart from the last variable, which relates specifically to the overall results of cash flow activities for the year, all other performance-related variables have featured in previous studies (see Singhvi and Desai, 1971; Cooke, 1989; Lang and Lundholm, 1993; Wallace et al., 1994; Wallace and Naser, 1995).

We suggest that performance-related variables are associated with indexes of cash flow reporting. For example, higher earnings return on sales or on equity, higher liquidity and positive net cash flow per £ worth of equity could stimulate corporate reporters to release more detailed cash flow information because such information may (a) provide investors (and other users) with important signals about the firm's financial viability, (b) boost management's compensation package and (c) lead to a change in the firm's share price. As Wallace and Naser (1995, p. 320) suggest, the ability of a firm to meet its short-term financial obligations without having to liquidate its long-term assets or cease operations is an important factor in the evaluation of the firm by interested parties. To allay the fears of investors and lenders, corporate reporters tend to give more details in corporate annual reports about their financial viability and liquidity. On this basis, we hypothesize that firms with higher liquidity and positive net cash flows are likely to provide more detailed cash flow information than firms with lower liquidity and negative cash flows.[6]

### *Market-related and Multinationality Variables*

This category of variables includes industry type, and a firm's multinationality[7] as represented by the number of its foreign operations and the proportion of its total sales to external parties that is attributable to overseas sectors. These variables are different from the other two categories in that they attempt to capture aspects of a firm's behavior that are unrelated to its underlying structure and performance because they describe a firm's association with its operational environment. As Wallace et al. (1994, p. 47) surmise, such variables include "corporate reporting cultures from industry, stock exchanges and type of auditor[8]... with which a firm is associated." On this basis, we suggest that a firm's cash flow reporting profile may differ from what we have captured, if it had not been associated

with a particular market-related culture (Wallace et al., 1994, p. 47). Although our sample does not include financial firms, we expect this type of industry variable to provide a partial explanation of the variation in the comprehensiveness of cash flow reporting, because as Dye and Sridhar (1995, pp. 160–168) suggest, different industries may provide differing details in their cash flow reporting in line with the peculiarities of their industries. Consequently, the industry-related disclosures would result in differential levels of disclosure on similar cash flow items (Wallace, 1987, p. 565). In addition, the findings from previous research on the comprehensiveness of financial reporting have suggested that this variable may be responsible for observable variation in the degree of comprehensiveness (see Cooke, 1991, p. 186).

Theoretical and empirical support has been given to the proposition that "foreign sales" as a proportion of total sales is associated with the comprehensiveness of disclosure (see Zarzeski, 1996, pp. 24 and 31). Foreign operations expose a firm to foreign exchange risks (such as difficulties of repatriating foreign cash flows), vagaries of foreign market operations and laws. To mitigate the effects of such risks on the share prices, firms with foreign operations may then provide more details on the cash flows from foreign sources. On the other hand, however, disclosure of information on foreign cash flows may raise unnecessary doubts about a company's financial liquidity and portfolio risks, such that reporting firms would be reluctant to release this type of information. While foreign to total sales percentage may signal a firm's potential exposure to risks of foreign exchange, it does not capture the risks of expropriation that may go with the location of operational facilities in foreign countries. In addition, a firm may locate its manufacturing operation in one country but derive a greater proportion of its foreign sales from another. As a result, we examined whether the role of the number of foreign operations and of foreign to total sales percentage as explanators of cash flow reporting comprehensiveness differs.

## MEASURING THE COMPREHENSIVENESS OF CASH FLOW REPORTING

There is little or no information in the accounting literature on how to observe and measure the comprehensiveness of cash flow reporting. This absence is partly due to the belief that the characteristics of comprehensive corporate reporting are neither clearly understood nor easily observable and measurable. As Lord Kelvin (quoted by Sterling, 1970, p. 71) said, "when you cannot measure what you are speaking about, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind." However, cash flow reporting comprehensiveness is an empirical construct that relates to the usefulness and understandability of the cash flow information released by corporate reporters. Because our study is the first attempt at measuring the comprehensiveness of cash flow reporting, an explanation of our measurement procedure is needed. Our operational definition of comprehensive cash flow reporting follows that suggested by Imhoff (1992, p. 101) for measuring disclosure comprehensiveness in general. That is, the score we awarded each firm is based on our "overall subjective assessment of the relevance, reliability and comparability of the [information on cash flows] produced by [the firm]." In essence, our scoring is based on our perception of the usefulness of the released cash flow information for the evaluation of a firm's liquidity, solvency and financial adaptability.

**Table 3.** Abridged Template for Scoring CFSs for Non-Financial UK Companies

| | Scores | |
|---|---|---|
| | Min | Max |
| 1. Disclosure items relating to cash flow from operating activities | | |
| (a) Nature of derivation and disclosure of cash flow information from operations (CFO) | 6 | 18 |
| (b) Segmental information on CFO | 0 | 4 |
| (c) Information on interest payments and receipts | 2 | 8 |
| (d) Information on income taxes paid | 2 | 4 |
| (e) Information on net dividends | 2 | 6 |
| 2. Disclosure items relating to cash flow from investing activities | 4 | 16 |
| 3. Disclosure items relating to cash flow from financial activities | 4 | 16 |
| 4. Explanatory notes and discussion of cash flow information in operating financial review (a counterpart of MD&A in the US) such as implications for the company's future | 0 | 10 |
| 5. Disclosure of cash and non-cash flow information commonly found in other parts of the financial statements such as definition of cash and cash equivalents, comparative cash flow statements | 0 | 14 |
| 6. Emerging cash flow disclosures (e.g., free cash flow, cash flow per £ worth of equity) | 0 | 9 |
| Total score | 20 | 105 |

We used a researcher-created template as the framework for evaluating the cash flow information disclosed in each firm's annual report for 1995. An abridged version of the full scoring template[9] is reproduced in Table 3. We did not limit our investigation to the CFS alone. We examined and scored financial and non-financial[10] cash flow information presented in the Operating and Financial Review section, the notes to the financial statements, notes to the CFS and the Directors' Report. For information released on the CFS, we evaluated those relating to cash flows from operating, financing and investing activities, and those relating to finance charges received and paid, dividends and taxation. We also evaluated and rewarded any statement presented which reconciles the overall net cash flow with the difference between cash and cash equivalents at the beginning and end of the year. We rewarded qualitative information if it elaborated and added to our understanding of the quantitative information on the cash flows.

Items in the CFS are not awarded equal weights for several reasons. First, a firm which reports OCF using the direct method gets 18 points while a firm which reports OCF using the indirect method is awarded a mark between 8 and 12 points. This distinction in point scales is essential in a study which is concerned with rewarding the extent of detail in the annual report. The firm reporting net OCF using the direct method offers a reader of the CFS more useful information than the firm reporting net OCF using the indirect method because (1) in addition to the direct method information, the firm also produces, in note form, a supplementary indirect method reconciliation of the net OCF with net income, (2) the direct method provides, in consonance with the objective of the CFS, information about cash received from customers and cash paid to suppliers and employees, two variables not currently reported by a firm using the indirect method (FASB, 1987, paragraph 111 and Krishnan and Largay, 1998, p. 13), and (3) the direct method presentation (a) offers users the ability to compare similar types of cash receipts and payments across firms, at least annually (Richardson, 1991)

and (b) facilitates sensitivity analysis of cash flows to volume changes as gross cash receipts and cash payments may respond differently to changes in activity (Cornell and Apostolou, 1992).

Second, cash flow information relating to investing activities and to financing activities are rewarded according to the extent of details provided. A one-line item on each type of information gets four points while additional details on each type of information such as disaggregation of the cash flow into inflow (sources) and outflow (uses), into individual items or segments (geographic or line of business) are awarded incremental points. The maximum point available for each type of information is 16.

Third, other disclosures on cash flow are rewarded in line with the extent of details provided. For example, the explanatory notes and discussion offered in the Operating and Financial Review (the equivalent of Management Discussion and Analysis in the US) are awarded points varying from zero (for no information) to 10 (for a comprehensive discussion of both the growth [decline] in net cash flows [4 points] and the implications for the firm's future [6 points]). Items of information on how a firm defines cash and cash equivalents, on reconciliation of old cash balance to new cash balance, on reconciliation of cash and cash equivalents reported in the CFS with those reported in the balance sheet, and on significant non-cash activities are awarded two points each. While emerging cash flow disclosures such as free cash flows and cash flow per £ worth of equity were awarded two points each, disclosure on cash flow forecasts was awarded five points because of its relevance to the prediction of future cash flows. The raw score for each firm was converted into an index.[11]

Two disclosure indexes are reported in Table 4 which gives the list of firms in the sample. One disclosure index relates to the total score we awarded to each firm for the entire cash flow information released in its annual report for the year. The other removes that part of the disclosure relating to information presented on OCFs. The removal of the information relating to OCFs arises because there is little variation in the scores earned by the firms. However, the evaluation of information relating to OCFs reveals the unpopularity of the direct method of presenting information.

Based on the above scoring procedure, the items that constitute the two indexes are weighted to reflect the perceptions of the 12 financial analysts that helped to pre-test the scoring template (see note 9). However, the weights factored into our scoring template may not reflect the preferences of other users of the CFS because weights derived from the perceptions of a user-group (e.g., financial analysts) do not often represent what the respondents actually do, and so may not communicate reality (Libby, 1981, pp. 40–43). Weights may also not represent real economic consequences to those whose opinions were pooled (Chow and Wong-Boren, 1987, p. 536). As a result, we re-evaluated the CFS of each sample firm, using an unweighted template which awarded the score of one to a sample firm for disclosing a CFS item in the template and a zero for not disclosing the item. The results from the unweighted scoring procedure were compared with those from the weighted procedure. The Spearman's (rank) correlation coefficient (0.7285) and the normal approximation test that the rank correlation is zero suggest that the ranking of the firms under both procedures is in the same order. Consequently, we conclude that the cash flow comprehensiveness indexes from an unweighted-procedure were not significantly different from the ones we report for the weighted-procedure.[12] This conclusion is

**Table 4.** List of Companies in the Sample and Their Indexes (Ranks in Ascending Order)

| *Name* | *Total index* | *Rank of total index* | *Sub-index* | *Rank of sub-index* |
|---|---|---|---|---|
| Vaux Group | 0.2095238 | 1 | 0.1443299 | 1 |
| Wessex Water | 0.2666667 | 2 | 0.2061856 | 2 |
| Nuclear Electric | 0.2828283 | 3 | 0.2197802 | 3 |
| LASMO | 0.3047619 | 4 | 0.2474227 | 4 |
| Iceland | 0.3238095 | 5 | 0.2680412 | 5 |
| Burmah Castrol | 0.3428572 | 7 | 0.2886598 | 7.5 |
| Great Universal Stores | 0.3428572 | 7 | 0.2736842 | 6 |
| Scottish Hydro-Electric | 0.3428572 | 7 | 0.2886598 | 7.5 |
| Berkeley Group | 0.3619048 | 11 | 0.3092783 | 11 |
| Chelsfield | 0.3619048 | 11 | 0.3092783 | 11 |
| John Lewis Partnership | 0.3619048 | 11 | 0.3092783 | 11 |
| United Utilities | 0.3619048 | 11 | 0.3092783 | 11 |
| Yorkshire Water | 0.3619048 | 11 | 0.3092783 | 11 |
| Albert Fisher | 0.3809524 | 16.5 | 0.3298969 | 17.5 |
| BNFL | 0.3809524 | 16.5 | 0.3298969 | 17.5 |
| Bruxton Estates | 0.3809524 | 16.5 | 0.3298969 | 17.5 |
| CAMELOT | 0.3809524 | 16.5 | 0.3298969 | 17.5 |
| Southern Water | 0.3809524 | 16.5 | 0.3298969 | 17.5 |
| Vickers | 0.3809524 | 16.5 | 0.3298969 | 17.5 |
| Mowlem | 0.3838384 | 20 | 0.3296703 | 14 |
| Bilton | 0.4 | 25 | 0.3505155 | 27.5 |
| Calor Group | 0.4 | 25 | 0.3505155 | 27.5 |
| Costain Group | 0.4 | 25 | 0.3505155 | 27.5 |
| House of Fraser | 0.4 | 25 | 0.3505155 | 27.5 |
| Kwiksave | 0.4 | 25 | 0.3505155 | 27.5 |
| Liberty International | 0.4 | 25 | 0.3505155 | 27.5 |
| SWEB | 0.4 | 25 | 0.3368421 | 21 |
| United News & Media | 0.4 | 25 | 0.3505155 | 27.5 |
| Rank | 0.4 | 25 | 0.3505155 | 27.5 |
| Eurotunnel | 0.4040404 | 30 | 0.3516484 | 32 |
| Greene King | 0.4190476 | 39 | 0.344086 | 22.5 |
| Shell | 0.4190476 | 39 | 0.344086 | 22.5 |
| AMEC | 0.4190476 | 39 | 0.371134 | 40 |
| Asda Group | 0.4190476 | 39 | 0.371134 | 40 |
| BAA | 0.4190476 | 39 | 0.371134 | 40 |
| Beazer | 0.4190476 | 39 | 0.371134 | 40 |
| David Smith | 0.4190476 | 39 | 0.371134 | 40 |
| Harrison Crosfield | 0.4190476 | 39 | 0.371134 | 40 |
| Hayes | 0.4190476 | 39 | 0.371134 | 40 |
| HP Bulmer Holdings | 0.4190476 | 39 | 0.371134 | 40 |
| Hunting | 0.4190476 | 39 | 0.371134 | 40 |
| IMI | 0.4190476 | 39 | 0.371134 | 40 |
| Land Securities | 0.4190476 | 39 | 0.371134 | 40 |
| National Grid | 0.4190476 | 39 | 0.371134 | 40 |
| Smiths Industries | 0.4190476 | 39 | 0.371134 | 40 |
| Tarmac | 0.4190476 | 39 | 0.371134 | 40 |
| TI Group | 0.4190476 | 39 | 0.371134 | 40 |
| Premier Oil | 0.4242424 | 48.5 | 0.3736264 | 48.5 |
| Lovell | 0.4242424 | 48.5 | 0.3736264 | 48.5 |

*(continued)*

**Table 4.** (Continued)

| *Name* | *Total index* | *Rank of total index* | *Sub-index* | *Rank of sub-index* |
|---|---|---|---|---|
| Laura Ashley | 0.4380952 | 60 | 0.3789474 | 50 |
| Vodafone Group | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Mirror Group | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Burton Group | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Severn Trent | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Hanson | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Great Portland Estates | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Hammerson | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Allied Colloids | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Christian Slavesen | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Tesco | 0.4380952 | 60 | 0.3917526 | 62.5 |
| William | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Seeboard | 0.4380952 | 60 | 0.3917526 | 62.5 |
| English China Clays | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Assoc British Foods | 0.4380952 | 60 | 0.3917526 | 62.5 |
| EMI Group | 0.4380952 | 60 | 0.3917526 | 62.5 |
| BOC | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Asprey | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Bowater | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Taylor Woodrow | 0.4380952 | 60 | 0.3917526 | 62.5 |
| TC Group | 0.4380952 | 60 | 0.3917526 | 62.5 |
| Monument | 0.4444444 | 71 | 0.3956044 | 73 |
| SWALEC | 0.4571429 | 82.5 | 0.3870968 | 51.5 |
| Willis Corron Group | 0.4571429 | 82.5 | 0.3870968 | 51.5 |
| BAT Industries | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| British Telecom | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Rugby Group | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Railtrack | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Bowthorpe | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| MEPC | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| LAING | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Charter | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Cowie | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Smith & Nephew | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| GEC | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| FKI | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Delta | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Southern Electric | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Slough Estates | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| BTR | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| APV | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| T D G | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Williams Holdings | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Scottish and Newcastle | 0.4571429 | 82.5 | 0.4123711 | 83.5 |
| Anglian Water | 0.4666667 | 94 | 0.4226804 | 97 |
| Aegis Group | 0.4761905 | 106 | 0.4210526 | 95 |
| Ellis & Everard | 0.4761905 | 106 | 0.4210526 | 95 |
| Courtaulds | 0.4761905 | 106 | 0.4210526 | 95 |
| British Vita | 0.4761905 | 106 | 0.4329897 | 107.5 |

*(continued)*

**Table 4.** (Continued)

| Name | Total index | Rank of total index | Sub-index | Rank of sub-index |
|---|---|---|---|---|
| Eastern Group | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Amersham International | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Hepworth | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Hickson International | 0.4761905 | 106 | 0.4329897 | 107.5 |
| J Sainsbury | 0.4761905 | 106 | 0.4329897 | 107.5 |
| London Electricity | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Laporte | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Caradon | 0.4761905 | 106 | 0.4329897 | 107.5 |
| ED&F Man Group | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Safeway | 0.4761905 | 106 | 0.4329897 | 107.5 |
| EMAP | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Ocean Group | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Ibstock | 0.4761905 | 106 | 0.4329897 | 107.5 |
| CIBA-GEIGY | 0.4761905 | 106 | 0.4329897 | 107.5 |
| BET | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Lonrho | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Allied Domecq | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Senior Engineering Group | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Sidlaw | 0.4761905 | 106 | 0.4329897 | 107.5 |
| Glaxo Holdings | 0.4952381 | 126 | 0.4536082 | 127 |
| BSG International | 0.4952381 | 126 | 0.4536082 | 127 |
| BICC | 0.4952381 | 126 | 0.4536082 | 127 |
| East Midlands Electricity | 0.4952381 | 126 | 0.4536082 | 127 |
| BP | 0.4952381 | 126 | 0.4536082 | 127 |
| News International | 0.4952381 | 126 | 0.4536082 | 127 |
| Bardon Group | 0.4952381 | 126 | 0.4536082 | 127 |
| Siebe | 0.4952381 | 126 | 0.4536082 | 127 |
| Reckitt & Colman | 0.4952381 | 126 | 0.4536082 | 127 |
| Tate & Lyle | 0.4952381 | 126 | 0.4536082 | 127 |
| Inchcape | 0.4952381 | 126 | 0.4536082 | 127 |
| Lucas | 0.4952381 | 126 | 0.4536082 | 127 |
| George Wimpy | 0.4952381 | 126 | 0.4536082 | 127 |
| Redland | 0.4952381 | 126 | 0.4536082 | 127 |
| T & N | 0.4952381 | 126 | 0.4536082 | 127 |
| Cordiant | 0.4952381 | 126 | 0.4536082 | 127 |
| Powergen | 0.4952381 | 126 | 0.4536082 | 127 |
| Granada Group | 0.5047619 | 135 | 0.4526316 | 118 |
| Wolseley | 0.5142857 | 143 | 0.4631579 | 136 |
| Scottish Power | 0.5142857 | 143 | 0.4742268 | 143.5 |
| Wagon Industrial | 0.5142857 | 143 | 0.4742268 | 143.5 |
| Rentokil | 0.5142857 | 143 | 0.4742268 | 143.5 |
| Camas | 0.5142857 | 143 | 0.4742268 | 143.5 |
| Sedgwick | 0.5142857 | 143 | 0.4742268 | 143.5 |
| NFC | 0.5142857 | 143 | 0.4742268 | 143.5 |
| Scapa Group | 0.5142857 | 143 | 0.4742268 | 143.5 |
| Cadbury Schweppes | 0.5142857 | 143 | 0.4742268 | 143.5 |
| Norcros | 0.5142857 | 143 | 0.4742268 | 143.5 |
| Cookson | 0.5142857 | 143 | 0.4742268 | 143.5 |
| Dalgety | 0.5142857 | 143 | 0.4742268 | 143.5 |

*(continued)*

**Table 4.** (Continued)

| *Name* | *Total index* | *Rank of total index* | *Sub-index* | *Rank of sub-index* |
|---|---|---|---|---|
| R M C Group | 0.5142857 | 143 | 0.4742268 | 143.5 |
| Meyer | 0.5142857 | 143 | 0.4742268 | 143.5 |
| McKechnie Group | 0.5142857 | 143 | 0.4742268 | 143.5 |
| Glynwed International | 0.5238096 | 151.5 | 0.4845361 | 154.5 |
| Northern Foods | 0.5238096 | 151.5 | 0.4845361 | 154.5 |
| Reuters | 0.5333334 | 160 | 0.4842105 | 152 |
| Unitech | 0.5333334 | 160 | 0.4842105 | 152 |
| Thames Water | 0.5333334 | 160 | 0.4842105 | 152 |
| British Airways | 0.5333334 | 160 | 0.4948454 | 161.5 |
| Johnson Matthey | 0.5333334 | 160 | 0.4948454 | 161.5 |
| Albright and Wilson | 0.5333334 | 160 | 0.4948454 | 161.5 |
| Scottish TV | 0.5333334 | 160 | 0.4948454 | 161.5 |
| Enterprise Oil | 0.5333334 | 160 | 0.4948454 | 161.5 |
| United Biscuits | 0.5333334 | 160 | 0.4948454 | 161.5 |
| THF | 0.5333334 | 160 | 0.4948454 | 161.5 |
| Marley | 0.5333334 | 160 | 0.4948454 | 161.5 |
| De La Rue | 0.5333334 | 160 | 0.4948454 | 161.5 |
| Unigate | 0.5333334 | 160 | 0.4948454 | 161.5 |
| Bass | 0.5333334 | 160 | 0.4948454 | 161.5 |
| Rexam | 0.5333334 | 160 | 0.4948454 | 161.5 |
| British Gas | 0.5523810 | 172 | 0.5052631 | 169.5 |
| Rolls Royce | 0.5523810 | 172 | 0.5052631 | 169.5 |
| Blue Circle Industries | 0.5523810 | 172 | 0.5052631 | 169.5 |
| Northern Electric | 0.5523810 | 172 | 0.5052631 | 169.5 |
| ICI | 0.5523810 | 172 | 0.5154639 | 174 |
| Midlands Electricity | 0.5523810 | 172 | 0.5154639 | 174 |
| British Steel | 0.5523810 | 172 | 0.5154639 | 174 |
| Sears | 0.5523810 | 172 | 0.5154639 | 174 |
| Racal Electronics | 0.5523810 | 172 | 0.5154639 | 174 |
| Tomkins | 0.5714286 | 178.5 | 0.5360824 | 180.5 |
| Zeneca | 0.5714286 | 178.5 | 0.5360824 | 180.5 |
| Unilever | 0.5714286 | 178.5 | 0.5360824 | 180.5 |
| Boots | 0.5714286 | 178.5 | 0.5360824 | 180.5 |
| Whitbread | 0.5809524 | 181.5 | 0.5463917 | 183.5 |
| National Power | 0.5809524 | 181.5 | 0.5463917 | 183.5 |
| Trafalgar House | 0.5904762 | 183.5 | 0.5473684 | 185 |
| Kingfisher | 0.5904762 | 183.5 | 0.5567010 | 186 |
| Cable & Wireless | 0.6000000 | 185.5 | 0.5670103 | 188.5 |
| Grand Metropolitan | 0.6000000 | 185.5 | 0.5670103 | 188.5 |
| Marks & Spencer | 0.6095238 | 190.5 | 0.5287356 | 177.5 |
| Wm Morrison SuperMarkets | 0.6095238 | 190.5 | 0.5287356 | 177.5 |
| Pearson | 0.6095238 | 190.5 | 0.5591398 | 187 |
| The Greenals Group | 0.6095238 | 190.5 | 0.5684211 | 190 |
| BBA Group | 0.6095238 | 190.5 | 0.5773196 | 192.5 |
| Arjo Wiggins Appleton | 0.6095238 | 190.5 | 0.5773196 | 192.5 |
| Rothmans | 0.6095238 | 190.5 | 0.5773196 | 192.5 |
| Yorhshire Electricity Group | 0.6095238 | 190.5 | 0.5773196 | 192.5 |

*(continued)*

**Table 4.** (Continued)

| Name | Total index | Rank of total index | Sub-index | Rank of sub-index |
|---|---|---|---|---|
| Smithkline Beecham | 0.6190476 | 195 | 0.5789474 | 195 |
| Guinness | 0.6285715 | 196 | 0.5979381 | 196 |
| Ladbroke Group | 0.6380953 | 197 | 0.6082474 | 197 |
| GKN | 0.6476191 | 198 | 0.6105263 | 198 |
| Pilkington | 0.6767676 | 199 | 0.6483517 | 199 |
| BPB | 0.6857143 | 200 | 0.6526316 | 200 |

in line with the findings of previous empirical research (Spero, 1979, pp. 42–64; Robbins and Austin, 1986, pp. 417–420; Chow and Wong-Boren, 1987, pp. 536–538).

## RESEARCH METHOD

### Sample Selection

We selected randomly a list of 250 *Times 1000* non-financial firms that are listed on the London Stock Exchange and requested these firms to send to us their 1994 and 1995 corporate annual reports. Financial firms were not selected because their cash flow reporting is non-comparable with that of non-financial firms. One hundred and forty non-financial firms[13] sent us their annual reports for 1995, while 128 of these firms sent us their annual reports for 1994.[14] In addition, we collected the 1995 annual reports of 60 of the non-responding non-financial firms that we originally targeted from the Financial Times Annual Report Service to bring the number of firms in our sample to 200.

The use of the annual reports of 2 years makes available to us information relating to 3 years since each annual report carries information relating to the preceding year, so that we have the CFSs for the years 1993, 1994 and 1995. Although we evaluated and reported on information relating to cash flows in the annual reports of 1995, we also examined the annual reports of 1994 in order to trace an item that is not reported in the 1995 accounts into the year 1993 to ascertain how a sample firm would have treated that item if it had cash flows of that nature in the 1995 reporting year. The year 1995 was selected because it precluded the observation of CFSs based on the new FRS 1 (Revised) by firms who may have decided to adopt the revised CFS format before its commencement date.[15] This would enable us to report on some of the nuances that might have been responsible for the revision of the FRS 1 (1991), but this is a topic for further consideration.

### Estimation Model

To address our testable implications, we used a multi-factor model in which cash flow reporting comprehensiveness indexes are regressed on the firm-specific characteristics

**Table 5.** (A) Definitions and Descriptive Statistics for Dependent and Independent Variables (Using 200 Observations)

| *Variable* | *Definitions* | *Expected sign* | *Mean* | *Std. dev.* | *Min* | *Max* |
|---|---|---|---|---|---|---|
| Dependent variables | | | | | | |
| Tilesub | Ranks of total score less the score for cfo converted into percentiles | | 0.5 | 0.2901609 | 0 | 1 |
| Tilinde | Ranks of total score converted into percentiles | | 0.5 | 0.2899232 | 0 | 1 |
| Independent-structure-related variables | | | | | | |
| Tilesale | Ranks of total revenue converted into percentiles | + | 0.5 | 0.2908496 | 0 | 1 |
| Tileaset | Ranks of total assets converted into percentile | + | 0.5 | 0.2920850 | 0 | 1 |
| Tilemcap | Ranks of market capitalisation converted into percentiles | + | 0.5 | 0.2908496 | 0 | 1 |
| Tileemp | Ranks of number of employees converted into percentiles | + | 0.5 | 0.2908498 | 0 | 1 |
| Tileleve | Ranks of book value of long-term debt divided by total assets converted into percentiles | + | 0.5 | 0.2908266 | 0 | 1 |
| Independent-performance-related variables | | | | | | |
| Tilencps | Ranks of net cash flow per £ worth of equity converted into percentiles | + | 0.5 | 0.2908145 | 0 | 1 |
| Tileliq | Ranks of current liabilities divided by current assets converted into percentiles | + | 0.5 | 0.2908350 | 0 | 1 |
| Tileros | Ranks of net profit divided by total sales converted into percentiles | + | 0.5 | 0.2906972 | 0 | 1 |
| Tileroe | Ranks of net profit divided by total equity converted into percentiles | + | 0.5 | 0.2905463 | 0 | 1 |
| Tileeps | Ranks of earnings per £ worth of equity converted into percentiles | + | 0.5 | 0.2908364 | 0 | 1 |
| Independent-market-related variables | | | | | | |
| Tilefop | Ranks of number of foreign operations converted into percentiles | + | 0.5 | 0.2903415 | 0.065 | 1 |
| Tilefsale | Ranks of ratio of foreign sales to total sales converted into percentiles | + | 0.5 | 0.2899060 | 0.091 | 0.996 |

*(continued)*

**Table 5.** (Continued)
(B) Summary Statistics for Original Values for Dependent and Independent Variables

| *Variable* | *obs* | *Mean* | *Std. dev.* | *Min* | *Max* |
|---|---|---|---|---|---|
| Total score | 200 | 49.915 | 7.90 | 22 | 72 |
| Subscore | 200 | 41.515 | 7.69 | 14 | 62 |
| Number of employees | 200 | 24058.51 | 34320.08 | 42 | 308000 |
| Total assets | 200 | 3456.348 | 7373.564 | 131 | 75965 |
| Market capitalisation | 200 | 2556.927 | 3780.977 | 79 | 24379 |
| Total sales | 200 | 3053.008 | 6389.242 | 26 | 69595 |
| Leverage percentage | 200 | 120.2 | 172.726 | 2 | 1947 |
| Liquidity (in ratio) | 200 | 1.590 | 1.857 | 0.19 | 22 |
| Return on sales | 200 | 15.239 | 17.453 | −17 | 97 |
| Return on equity | 200 | 8.785 | 20.856 | −198 | 52 |
| Net cash flow per £ worth of equity | 200 | −8.282 | 110.831 | −1500 | 147 |
| Earnings per £ worth of equity | 200 | 127.631 | 321.087 | −257.7 | 3375 |
| Number of foreign operations | 200 | 19.035 | 25.861 | 0 | 180 |
| Ratio of foreign operations to total sales | 200 | 39.958 | 30.726 | 0 | 91 |

*Note:* With the exception of information on market capitalisation, data on firm-specific characteristics were collected from the corporate annual reports whose CFSs were evaluated. Industry and Net cash flow variables are defined later.

before and after controlling for industry-type and the net change in overall cash position. For each sample firm, the following OLS regression estimation process is assumed to hold:

$$\begin{aligned}\text{tilinde}_j = {} & \beta_0 + \beta_1 \text{ Firm size}_j + \beta_2 \text{ tileleve}_j + \beta_3 \text{ tilefsale}_j + \beta_4 \text{ tilencps}_j + \beta_5 \text{ tileliq}_j \\ & + \beta_6 \text{ tilefop} + \beta_7 \text{ tileros}_j + \beta_8 \text{ tileroe}_j + \beta_9 \text{ tileeps}_j + \beta_{10} \text{ IND1}_j + \beta_{11} \text{ IND2}_j \\ & + \beta_{12} \text{ IND3}_j + \beta_{13} \text{ NCflow}_j + \varepsilon_j\end{aligned}$$

where the dependent variable, $\text{tilinde}_j$, is the disclosure index (that is, the actual score for each sample firm divided by the total possible score) and the independent variables include (1) those whose β's range from subscript 1 to 9 and are defined in Table 5A, (2) NCflow (net cash flows which could be positive = 1 or negative = −1) and (3) the following industry groups:

IND1 = 1 for manufacturing firms and 0 otherwise;
IND2 = 1 for service firms and 0 otherwise;
IND3 = 1 for trading firms and 0 otherwise; and
IND4 = 1 for conglomerates and 0 otherwise.

The conglomerate industry variable (IND4) is used as the reference category in the regression analysis. The industry group variables were included in the analysis in view of the apparent differences in the comprehensiveness of CFS across industry as shown in Table 8.

The independent variable for firm size is measured in four different ways: total assets, net sales, market capitalization, and number of employees. Earlier discussion has suggested that our expectation of the particular form of relation between cash flow reporting comprehensiveness and firm-specific characteristics has been derived from the literature on other parts of annual reports *not* CFSs. However, cash flows are not accruals; thus, the theoretically correct expectation for accrual flows may not be correct for cash flows. As a result, our expectation of the relationship between the comprehensiveness of cash flow reporting and firm-specific characteristics is tentative and may not be the theoretically correct form of association between them. In such a situation, it has been suggested that the dependent and independent variables should be transformed into ranks before applying the OLS regression (Beaver et al., 1979; Lang and Lundholm, 1993, p. 261).

The literature (Iman and Conover, 1979, p. 508; Cheng et al., 1992, pp. 587–589) has suggested that rank (OLS) regression is a powerful procedure for analyzing a data set with non-linear and monotonic relationships between the dependent and one or more independent variables and that rank transformation provides additional confidence in statistical results because it (a) yields a distribution-free data set, (b) provides results similar to the ones that can be derived from non-ranked data, (c) produces a substantial improvement in $R^2$ and (d) mitigates the impact of measurement errors, outliers and residual heteroscedasticity on the regression results.

### Data Transformation

In line with Lang and Lundholm (1993, p. 264); Wallace et al. (1994, p. 47) and Wallace and Naser (1995, p. 332), we ranked the dependent and independent variables and converted the ranks to percentiles: (rank$-$1)/(number of firms$-$1). The conversion produces a firm's rank within the sample, so that the lowest-ranking firm receives a zero and the highest-ranking firm receives a one.[16,17]

### Statistical Analysis

Multivariate OLS regressions were used to examine the testable implications. Table 5B provides the descriptive statistics for the variables used in the study. We ran two sets of regressions using, respectively, both the total score and the sub-score (which exclude the score relating to the presentation of information relating to OCFs) as dependent variables in order to test whether the relations hold with and/or without OCFs information. We provide the results for the total scores but not the subscore because the two results are not significantly different from one another.

## RESULTS

### Univariate Tests

The Pearson product–moment correlations (1) between the two sets of CFS comprehensiveness indexes and (2) between each of the two CFS comprehensiveness indexes

**Table 6.** Pearson Correlations Between Firm-specific Characteristics and Cash Flow Indexes

| | *Tilesub* | *Tilinde* | *Tileaset* | *Tilesale* | *Tilemcap* | *Tileemp* | *Tileleve* | *Tilefsale* | *Tilencps* | *Tileliq* | *Tilefop* | *Tileros* | *Tileroe* | *Tileeps* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tilesub | 1.0000 | | | | | | | | | | | | | |
| Tilinde | 0.9967* | 1.0000 | | | | | | | | | | | | |
| Tileaset | 0.2244* | 0.2218* | 1.0000 | | | | | | | | | | | |
| Tilesale | 0.3503* | 0.3480* | 0.7241* | 1.0000 | | | | | | | | | | |
| Tilemcap | 0.2771* | 0.2747* | 0.8279* | 0.7507* | 1.0000 | | | | | | | | | |
| Tileemp | 0.3262* | 0.3257* | 0.5889* | 0.8133* | 0.6329* | 1.0000 | | | | | | | | |
| Tileleve | 0.0972 | 0.0926 | 0.0813 | 0.1550* | −0.0213 | 0.0479 | 1.0000 | | | | | | | |
| Tilefsale | 0.2557* | 0.2547* | 0.0672 | 0.2123* | 0.1338 | 0.2836* | 0.2592* | 1.0000 | | | | | | |
| Tilencps | 0.0380 | 0.0346 | 0.0977 | 0.1118 | 0.0482 | 0.0298 | 0.0650 | 0.1011 | 1.0000 | | | | | |
| Tileliq | 0.0626 | 0.0535 | −0.2003* | −0.1356 | −0.1754* | −0.0515 | −0.0264 | 0.3163* | 0.1949* | 1.0000 | | | | |
| Tilefop | 0.2500* | 0.2446* | 0.1229 | 0.3008* | 0.2355* | 0.3822* | 0.2326* | 0.7133* | 0.1683* | 0.3072* | 1.0000 | | | |
| Tileros | −0.1422* | −0.1412* | 0.2707* | −0.2661* | 0.2362* | −0.2999* | −0.2859* | −0.1967* | 0.0079 | −0.0825 | −0.1899* | 1.0000 | | |
| Tileroe | 0.0402 | 0.0458 | 0.0085 | 0.1032 | 0.1762* | −0.0286 | 0.0097 | −0.0615 | −0.0129 | −0.0533 | −0.0069 | 0.3226* | 1.0000 | |
| Tileeps | 0.0823 | 0.0824 | 0.2546* | 0.2396* | 0.3134* | 0.2192* | −0.1106 | −0.0198 | 0.0599 | −0.0413 | 0.0483 | 0.3159* | 0.4106* | 1.0000 |

*Notes:* See definitions of variable acronyms in Table 5A.
*Correlation coefficient is significant at 5% level or better ($p$-values are for one-tailed tests).

and each of the independent variables are presented in the first two columns of Table 6. One-tailed tests of significance were used to evaluate the "validity" of the hypotheses because the hypotheses were directional. As previously discussed, the differences in the pattern of corporate reporting of information relating to OCFs are minimal. This minimal differential pattern indicates that the total score and the sub-score (excluding the score relating to information on OCFs) have a correlation that is close to 1, suggesting that the two disclosure indexes are capturing similar aspects of cash flow reporting. The coefficients of correlation between each of the two disclosure indexes and each of the independent variables suggest that each of the four firm size variables (total assets, sales, market capitalization and number of employees), percentage of foreign operations (*tilefop*), and return on sales were significant at 5% or better and in the expected direction. The coefficients of correlation between the firm size variables and disclosure indexes are higher than those between the disclosure indexes and every other independent variable. This closer association between firm size variables and disclosure indexes suggests that those firm size variables are surrogating for phenomena that are different from those which other variables are surrogating and that collinearity among the firm size variables is an issue, while collinearity across other variables is not (Wallace and Naser, 1995, p. 335). Thus, we conclude that multicollinearity exists among the four firm size variables. As a result, we did not factor into any of the regressions more than one of the four firm size variables at a time; this has resulted in our reporting the results of four regressions in Table 7.

## Multicollinearity

The correlation matrix (reported in Table 6) also suggests that several dyads of independent variables are highly correlated. Other symptoms of multicollinearity were present in our study. For example, the results from the univariate tests and regression analyses are inconsistent in several respects. The correlation coefficients (in Table 6) and the regression coefficients (Table 7) for some independent variables differ both in respect of sign and level of significance. Problems arise in regression when independent variables are highly correlated. For example, the variable *tilefsale* is highly correlated with the variable *tilefop*. Such multicollinearity often results in inflated standard errors of the fitted coefficients. Furthermore, estimated coefficients of some highly correlated predictors may not be statistically significant even though a statistical relation exists between the dependent and independent variables. For these reasons, we examined the multicollinearity problem by calculating the variance inflation factors (VIFs) for each independent variable specified in our regression models. The VIF for each independent variable ($x_j$) is calculated as $1/(1 - R_j^2)$, where $R_j^2$ is the square of the multiple correlation coefficient that results when $x_j$ is regressed against all the other independent variables (Bowerman and O'Connell 1990, p. 447; Myers, 1990, p. 369; Chatterjee and Price, 1991, pp. 191–193; Wallace et al., 1994, p. 49).

The VIFs for each independent variable in each of the four regression models are reported in Table 7. According to Chatterjee and Price (1991, pp. 191–193), multicollinearity is a problem if (1) the highest VIF is greater than 10 (some choose a more conservative threshold value of 30) and the average of all VIFs from a regression model is considerably larger than

**Table 7.** Regressions Using Total Score with Different Size Variable in Each of the Four Panels (See Definitions of Variable Acronyms in Table 5A)

*Panel A: Percentile of Total Assets Ranks as the Only Size Variable. Number of obs = 200; F (13,186) = 3.59; Prob > F = 0.0000; $R^2$ = 0.2004; Adj $R^2$ = 0.1445; Root MSE = 0.26816*

| *Source* | *SS* | *df* | *MS* |
|---|---|---|---|
| Model | 3.35213376 | 13 | 0.257856443 |
| Residual | 13.37490610 | 186 | 0.071908097 |
| Total | 16.72703986 | 199 | 0.084055476 |

| *Tilinde* | *Coef.* | *Std. err.* | *t* | *P > \|t\|* | *VIF* | *95% Conf. interval* | |
|---|---|---|---|---|---|---|---|
| Tileaset | 0.2876531 | 0.0766084 | 3.755 | 0.000 | 1.37 | 0.1365200 | 0.4387862 |
| Tileleve | −0.0721787 | 0.0727861 | −0.992 | 0.323 | 1.24 | −0.2157711 | 0.0714137 |
| Tilefsale | 0.1674363 | 0.0982306 | 1.705 | 0.090 | 2.24 | −0.0263530 | 0.3612257 |
| Tilencps | 0.1507832 | 0.1182082 | 1.276 | 0.204 | 3.27 | −0.0824179 | 0.3839842 |
| Tileliq | −0.0076084 | 0.0783292 | −0.097 | 0.923 | 1.44 | −0.1621363 | 0.1469194 |
| Tilefop | 0.034011 | 0.0975479 | 0.349 | 0.728 | 2.22 | −0.1584316 | 0.2264536 |
| Tileros | −0.1871173 | 0.0810683 | −2.308 | 0.022 | 1.54 | −0.3470489 | −0.0271857 |
| Tileroe | 0.1204773 | 0.0767393 | 1.570 | 0.118 | 1.38 | −0.0309140 | 0.2718685 |
| Tileeps | 0.0115065 | 0.0791690 | 0.145 | 0.885 | 1.47 | −0.1446781 | 0.1676911 |
| IND1 | 0.2265413 | 0.0827036 | 2.739 | 0.007 | 4.74 | 0.0633837 | 0.3896990 |
| IND2 | 0.1311090 | 0.0902058 | 1.453 | 0.148 | 4.61 | −0.0468490 | 0.3090670 |
| IND3 | 0.1716741 | 0.0913512 | 1.879 | 0.062 | 3.43 | −0.0085436 | 0.3518917 |
| NCflow | −0.0622759 | 0.0346222 | −1.799 | 0.074 | 3.25 | −0.1305785 | 0.0060268 |
| _cons | 0.0628125 | 0.1298529 | 0.484 | 0.629 | – | −0.1933613 | 0.3189864 |
| Mean VIF | | | | | 2.48 | | |

*Panel B: Percentile of Rank of Total Sales to External Parties as the Only Size Variable. Number of obs = 200; F (13,186) = 3.90; Prob > F = 0.0000; $R^2$ = 0.2143; Adj $R^2$ = 0.1594; Root MSE = 0.26581*

| *Source* | *SS* | *df* | *MS* |
|---|---|---|---|
| Model | 3.58531594 | 13 | 0.275793534 |
| Residual | 13.14172390 | 186 | 0.070654429 |
| Total | 16.72703984 | 199 | 0.084055476 |

| *Tilinde* | *Coef.* | *Std. err.* | *t* | *P > \|t\|* | *VIF* | *95% Conf. interval* | |
|---|---|---|---|---|---|---|---|
| Tilesale | 0.3351270 | 0.0797709 | 4.201 | 0.000 | 1.52 | 0.1777549 | 0.4924992 |
| Tileleve | −0.0339422 | 0.0712535 | −0.476 | 0.634 | 1.21 | −0.1745111 | 0.1066268 |
| Tilefsale | 0.1626098 | 0.0973844 | 1.670 | 0.097 | 2.24 | 0.0295102 | 0.3517298 |
| Tilencps | 0.1830766 | 0.1168966 | 1.566 | 0.119 | 3.25 | −0.0475371 | 0.4136902 |
| Tileliq | 0.0091942 | 0.0781794 | 0.118 | 0.907 | 1.46 | −0.1450381 | 0.1634264 |
| Tilefop | 0.0046195 | 0.0977058 | 0.047 | 0.962 | 2.27 | −0.1881346 | 0.1973735 |
| Tileros | 0.0224446 | 0.0815357 | 0.275 | 0.783 | 1.58 | −0.1384091 | 0.1832983 |
| Tileroe | 0.0353834 | 0.0746818 | 0.474 | 0.636 | 1.33 | −0.1119489 | 0.1827157 |
| Tileeps | −0.0178080 | 0.0797817 | −0.223 | 0.824 | 1.52 | −0.1752013 | 0.1395853 |
| IND1 | 0.2330647 | 0.0820574 | 2.840 | 0.005 | 4.75 | 0.0711819 | 0.3949475 |
| IND2 | 0.1452416 | 0.0895583 | 1.622 | 0.107 | 4.63 | −0.0314389 | 0.3219222 |
| IND3 | 0.1745324 | 0.0904981 | 1.929 | 0.055 | 3.42 | −0.0040022 | 0.3530670 |
| NCflow | −0.0771959 | 0.0344788 | −2.239 | 0.026 | 3.28 | −0.1452156 | −0.0091761 |
| _cons | −0.0450539 | 0.1342595 | −0.336 | 0.738 | – | −0.3099210 | 0.2198132 |
| Mean VIF | | | | | 2.50 | | |

*(continued)*

**Table 7.** (Continued)

*Panel C: Market Capitalisation as the Only Size Variable. Number of obs = 200; F (13,186) = 4.11; Prob > F = 0.0000; $R^2$ = 0.2234; Adj $R^2$ = 0.1691; Root MSE = 0.26428*

| *Source* | *SS* | *df* | *MS* |
|---|---|---|---|
| Model | 3.73605549 | 13 | 0.287388884 |
| Residual | 12.99098431 | 186 | 0.069844002 |
| Total | 16.72703980 | 199 | 0.084055476 |

| *Tilinde* | *Coef.* | *Std. err.* | *t* | *P > \|t\|* | *VIF* | *95% Conf. interval* | |
|---|---|---|---|---|---|---|---|
| Tilemcap | 0.3416916 | 0.0763809 | 4.474 | 0.000 | 1.41 | 0.1910074 | 0.4923757 |
| Tileleve | −0.0245888 | 0.0708411 | −0.347 | 0.729 | 1.21 | −0.1643442 | 0.1151665 |
| Tilefsale | 0.1615707 | 0.0968268 | 1.669 | 0.097 | 2.25 | −0.0294493 | 0.3525907 |
| Tilencps | 0.2112775 | 0.1164165 | 1.815 | 0.071 | 3.27 | −0.0183890 | 0.4409440 |
| Tileliq | 0.0076259 | 0.0774192 | 0.099 | 0.922 | 1.44 | −0.1451067 | 0.1603585 |
| Tilefop | −0.0237091 | 0.0983707 | −0.241 | 0.810 | 2.32 | −0.2177749 | 0.1703566 |
| Tileros | −0.1540176 | 0.0772852 | −1.993 | 0.048 | 1.44 | −0.3064858 | −0.0015494 |
| Tileroe | 0.0586449 | 0.0740055 | 0.792 | 0.429 | 1.32 | −0.0873531 | 0.2046429 |
| Tileeps | −0.0009501 | 0.0780936 | −0.012 | 0.990 | 1.47 | −0.1550132 | 0.1531130 |
| IND1 | 0.2658562 | 0.0825123 | 3.222 | 0.002 | 4.86 | 0.1030758 | 0.4286366 |
| IND2 | 0.1596711 | 0.0892742 | 1.789 | 0.075 | 4.65 | −0.0164490 | 0.3357912 |
| IND3 | 0.2129154 | 0.0900544 | 2.364 | 0.019 | 3.43 | 0.0352562 | 0.3905747 |
| NCflow | −0.0785976 | 0.0342933 | −2.292 | 0.023 | 3.28 | −0.1462514 | −0.0109439 |
| _cons | −0.0101315 | 0.1306302 | −0.078 | 0.938 | – | −0.2678388 | 0.2475757 |
| Mean VIF | | | | | 2.49 | | |

*Panel D: Number of Employees as the Only Size Variable. Number of obs = 200; F (13,186) = 3.70; Prob > F = 0.0000; $R^2$ = 0.2054; Adj $R^2$ = 0.1499; Root MSE = 0.26731*

| *Source* | *SS* | *df* | *MS* |
|---|---|---|---|
| Model | 3.43617102 | 13 | 0.264320847 |
| Residual | 13.29086880 | 186 | 0.071456284 |
| Total | 16.72703982 | 199 | 0.084055476 |

| *Tilinde* | *Coef.* | *Std. err.* | *t* | *P > \|t\|* | *VIF* | *95% Conf. interval* | |
|---|---|---|---|---|---|---|---|
| Tileemp | 0.3308633 | 0.0844102 | 3.920 | 0.000 | 1.68 | 0.1643389 | 0.4973877 |
| Tileleve | 0.0031852 | 0.0721169 | 0.044 | 0.965 | 1.23 | −0.1390870 | 0.1454575 |
| Tilefsale | 0.1551438 | 0.0979935 | 1.583 | 0.115 | 2.25 | −0.0381778 | 0.3484654 |
| Tilencps | 0.1922635 | 0.1175906 | 1.635 | 0.104 | 3.26 | −0.0397192 | 0.4242461 |
| Tileliq | −0.0241816 | 0.0772289 | −0.313 | 0.755 | 1.40 | −0.1765388 | 0.1281755 |
| Tilefop | −0.0295046 | 0.1008627 | −0.293 | 0.770 | 2.39 | −0.2284865 | 0.1694773 |
| Tileros | 0.0304267 | 0.0834094 | 0.365 | 0.716 | 1.64 | −0.1341233 | 0.1949767 |
| Tileroe | 0.0793989 | 0.0749992 | 1.059 | 0.291 | 1.32 | −0.0685594 | 0.2273573 |
| Tileeps | −0.0308280 | 0.0816821 | −0.377 | 0.706 | 1.57 | −0.1919704 | 0.1303145 |
| IND1 | 0.2686221 | 0.0839504 | 3.200 | 0.002 | 4.91 | 0.1030048 | 0.4342395 |
| IND2 | 0.1551706 | 0.0902948 | 1.718 | 0.087 | 4.65 | −0.0229629 | 0.3333042 |
| IND3 | 0.1908457 | 0.0909376 | 2.099 | 0.037 | 3.42 | 0.0114440 | 0.3702474 |
| NCflow | −0.0682867 | 0.0345364 | −1.977 | 0.049 | 3.25 | −0.1364202 | −0.0001532 |
| _cons | −0.0691378 | 0.1381148 | −0.501 | 0.617 | – | −0.3416106 | 0.2033351 |
| Mean VIF | | | | | 2.54 | | |

*(continued)*

**Table 7.** (Continued)

| *Industry* | *Frequency* | *Percent* | *Cum.* |
|---|---|---|---|
| IND1 Manufacturing | 94 | 47.00 | 47.00 |
| IND2 Service | 57 | 28.50 | 75.50 |
| IND3 Trading | 36 | 18.00 | 93.50 |
| IND4 Conglomerate | 13 | 6.50 | 100.00 (reference category) |
| Total | 200 | 100.00 | |

one. The highest VIF reported in all of the four panels of Table 7 is 4.91 (IND1 in Panel D). However, the output of the VIF calculations suggests that the results are mixed. Although we do not report any VIF greater than 10, the averages of all the VIFs in each of the four regression models are greater than one, though not considerably so. We, therefore, conclude that multicollinearity is not a problem in our analysis.[18]

## Regression Analyses

We used the sign of the coefficient and its two-tailed *t*-test statistic (at 5% level) to respectively assess the direction of relationship and the significance of each firm-specific characteristic in our estimation models. The results reported in Table 7 suggest that cash flow reporting comprehensiveness is an increasing function of firm size, as expected (see Table 5A), indicating more disclosure in CFSs as firm size increases. However, the partial contribution of the other firm-specific characteristics tends to vary with the measurement basis for firm size. When firm size was measured by total assets, the results suggest that cash flow reporting comprehensiveness is an increasing function of total assets and that the relationship is highly significant (at below the *p*-value of 5%, using a two-tailed test). The results also suggest that cash flow reporting comprehensiveness is a decreasing function of return on sales (highly significant at $p$-value $\leqslant$ 0.05). The finding that cash flow reporting comprehensiveness is a decreasing function of return on sales contradicts our initial speculation and suggests that firms choose the extent of disclosure in CFSs, at least in part, according to the strength of their return on sales. The results also suggest that the relative influence of sample manufacturing firms (IND1) in the model is significantly different from those of other industry variables. The results reported in Panel A of Table 7 suggest that manufacturing firms and firms with high total assets value and low return on sales tend to produce CFSs that are highly comprehensive. However, when firm size was measured by net sales to external parties, the signs of the coefficients of all the firm-specific characteristics (except return on sales) remained the same. Though firm size remained significant, return on sales was no longer significant, and negative net cash flow was now significant (see Panel B of Table 7).

In the estimation model, using market capitalized value as a measure of firm size (Table 7 Panel C), all the other firm-specific characteristics (except percentage of foreign sales) were in the direction suggested by the results in Panel A of Table 7. Firm size, return on sales, negative net cash flow (NCflow) and manufacturing and trading industry variables were statistically significant. When number of employees was used as a measure

of firm size, NCflow, firm size, and manufacturing and trading industry variables were highly significant.

Compared to the disclosure indexes from the study of other parts of the corporate annual report, the range of disclosure indexes from our study of CFSs is relatively narrow. This lack of width in the range of variation suggests that there is little managerial exercise of innovative reporting in the CFSs released by UK firms.[19] As our previous discussion suggests, there is little to separate the reporting of the make-up of net OCFs. Because of the predominant lack of variation in the reporting of OCFs, we removed the score for this section of CFS from the total score to arrive at a non-CFO score (sub-index reported in Table 4) and treated the percentiles of the ranks of these non-CFO scores as a second dependent variable which we regressed on the firm-specific characteristics. The results from this procedure (not reported here) are similar to the one derived from the estimation procedure that used the total score. This suggests that the operating activities section of the CFS is not a critical factor in the determination of a firm's cash reporting comprehensiveness.

## Structural Reporting Differences

The impact of the industry group variables varies from model to model with IND1 (manufacturing firms) being significant in all models while IND3 (trading firms) is significant in the models using market capitalization and number of employees as constructs for firm size. Manufacturing firms presented more comprehensive CFSs compared to conglomerates. In addition, the coefficients of IND1 (manufacturing group) is significantly higher than those for IND2 (service group) and IND3 (trading group) indicating that manufacturing firms presented more comprehensive CFSs than service (IND2) and trading (IND3) firms.

While the model using the pooled sample may tell us a lot about the relative significance of certain independent variables on the comprehensiveness of CFSs issued by sample firms, it is not capable of explaining to us whether those same variables would possess the same level of significance when sub-groups of the entire sample are considered. We separated the firms in our sample in two ways to find out whether there would be a systematic difference in the factors which can explain their reporting patterns. We now report on these investigations.

## Industry-type Analysis

This section extends our analysis to consider the implication, if any, of specific industrial environment of firms in our sample, on the relationships between cash flow reporting comprehensiveness indexes and firm-specific characteristics. Differences in the industrial environment are captured by partitioning the sample into four self-selected industrial sectors: manufacturing, service, trading and conglomerate as reported in Table 1. The results of the one-way analysis of variance (ANOVA) tests, reported in Panel A of Table 8, suggest that there are significant differences among the means of the cash flow reporting comprehensiveness indexes awarded to firms in each industry group.

**Table 8.** Tests of Equality of Means of Total Scores

*Panel A: Oneway Analysis of Variance of Total Score by Industry Type*

| | | Summary of tscore | | |
|---|---|---|---|---|
| | *Industry* | *Mean* | *Std. dev.* | *Freq.* |
| IND1 | Manufacturing | 51.031915 | 7.6403740 | 94 |
| IND2 | Service | 47.807018 | 8.7022957 | 57 |
| IND3 | Trading | 51.416667 | 7.2560320 | 36 |
| IND4 | Conglomerate | 46.923077 | 5.5145495 | 13 |
| Total | | 49.915 | 7.9082538 | 200 |

*Analysis of Variance*

| *Source* | *SS* | *df* | *MS* | *F* | *Prob > F* |
|---|---|---|---|---|---|
| Between groups | 568.100475 | 3 | 189.366825 | 3.12 | 0.0270 |
| Within groups | 11877.454530 | 196 | 60.5992578 | | |
| Total | 12445.555005 | 199 | 62.5404774 | | |

*PANEL B: t-test on Positive and Negative Cash Flows*

| *Variable* | *Obs* | *Mean* | *Std. dev.* |
|---|---|---|---|
| Negative | 116 | 50.12931 | 7.518707 |
| Positive | 84 | 49.61905 | 8.453850 |
| Combined | 200 | 49.91500 | 7.908254 |

*Notes:* Ho: mean(x) = mean(y) (assuming equal variances); $t = 0.45$ with 198 d.f.; Pr > |t| = 0.6536.
Bartlett's test for equal variances: chi2(3) = 4.1288; Prob > chi2 = 0.248.

The estimation across industry types was one of separately conducting all of the tests reported in Table 7. The results of our controlling for industry type suggest that the relationship between cash flow reporting comprehensiveness indexes and firm-specific characteristics is industry-specific. Firm size as an explanatory variable was significant for all industry types when firm size was measured by market capitalization. However, when firm size was measured by total sales, it was significant only in the case of service and conglomerate industry types. When firm size was measured by number of employees, it was significant only for the manufacturing and conglomerate sectors. When total assets was used as a proxy for firm size, it was not significant under any industry type. These findings suggest to us that the relative influence of firm size as a predictor of the comprehensiveness of cash flow reporting depends on a firm's industry type and the way firm size is measured.

## Positive Versus Negative Net Cash Flows

The signalling hypothesis suggests that firms with good news (i.e., positive net cash flows) would have incentives to volunteer highly comprehensive announcements (i.e., cash flow reporting, in our study) that separate them from firms with bad news (i.e.,

negative net cash flows) (see Penman, 1980 and Ajinkya and Gift, 1984). On the contrary, because negative net cash flows are unwanted news by investors, reporting firms often provide explanations (of the causes of the negative results) and information (on how such negative results may be reversed in the future) that would have been unwarranted were the firms to have positive net cash flows. As a result, it is difficult to provide a satisfactory theory on the link between cash flow performance and comprehensive cash flow disclosures. This inability to specify a theoretically correct expectation is not surprising because the findings from the literature on the effect of good or bad news on voluntary release of information are mixed. While Penman (1980, pp. 152–157) reports that good news firms tend to release more information, the study by Ajinkya and Gift (1984, pp. 436–443) does not support such evidence. Panel B of Table 8 also reports the results of the *t*-tests of the equality of the means of the total score awarded to firms with negative net cash flows versus firms with positive net cash flows which suggest that there are no significant differences between them. These results are different from those reported for NC flow in Table 6. In this case, these results tend to indicate that the sign of cash flow is significant when other independent variables are appropriately factored into the model.

If the relationship between cash flow reporting comprehensiveness and the firm-specific characteristics is somehow connected with whether net cash flows are positive or negative, we suggest that the characteristics of firms with negative net cash flows would differ from those of firms with positive net cash flows. To test our assertion that the statistical significance of individual firm-specific characteristics will differ between firms with positive net cash flows and firms with negative net cash flows, we examined the relationship between total scores and the firm-specific characteristics for each group of firms, taking each of the four highly correlated firm size variables in turn. For firms with negative net cash flows, firm size is the only company characteristic significantly associated with indexes of cash flow reporting comprehensiveness. The signs of their coefficients are positive, as expected, indicating more comprehensive disclosures as firm size increases for these firms. In addition, the coefficient for each of the four highly correlated firm size variables is higher for negative net cash flow firms than for positive net cash flow firms. These findings suggest that firms tend to disclose more information in their CFSs according to the sign of their net cash flows.

## CONCLUSIONS

Our paper has reported the results of an evaluation of the comprehensiveness of cash flow reporting[20] in the United Kingdom and of the investigation of the relationships between that comprehensiveness and some selected firm-specific characteristics. Our findings suggest that cash flow reporting comprehensiveness is an increasing function of firm size (however defined) while that comprehensiveness is a decreasing function of return on sales. Our results also suggest that manufacturing and trading firms and negative net cash flow firms tend to release more comprehensive CFSs than the service and conglomerate firms and positive net cash flow firms. We observed a lack of variation in the reporting of the components of net OCFs by our sample firms and the non-articulation of the reported amounts for items reconciling net operating profits to

net OCFs with the differences between the closing and opening balances of the relevant working capital items in the balance sheet. We also reported the emergence of the reporting of *free cash flows*. Our study has its own limitations.

One limitation is the possibility that our researcher-created disclosure index template may not capture some cash flow items that are of more practical significance to users. However, our inability to precisely define cash flow reporting comprehensiveness or to capture its very essence is not as serious as the fact that our sample firms are among the relatively large UK firms that are listed on the London Stock Exchange and have a relatively good corporate reporting comprehensiveness. For example, all our sample firms are audited by one or more firms from the Big 10 auditors in the United Kingdom. Note also that firm size is best regarded as nothing more than a catch-all control variable. The low variation in the disclosure indexes awarded to our firms further reduces the power of our tests. It would have been helpful if we had a more varied sample of firms with a wider range of disclosure comprehensiveness indexes (Imhoff, 1992, p. 116). Another limitation of our results relates to the low $R^2$ of all the models, suggesting that the dependent variable can be explained by other variables not captured in the models.

In line with previous research, we have used an observable endogenous partial estimation model which factors in structure-related, performance-related and market-related firm characteristics but have ignored the costs to corporate reporters of providing cash flow information and the costs of using the information. As Antle (1996, p. 390) suggests, scholars (including ourselves) have yet to build a satisfactory theory of partial disclosures that recognizes the costs of the accounting encoding process itself and the attendant costs, to users, of performing the decoding operations required to get the desired information.

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## NOTES

1. Comprehensiveness is a quality of disclosure concerned with the extent of details released on each item of information included in a corporate annual report (see Wallace and Naser, 1995; and Wallace et al., 1994).
2. However, one study (Christopher and Hassan, 1996) examined the factors likely to influence the voluntary release of cash flow statements by Australian firms in 1990. The study was concerned with finding out whether some selected predictor variables differ between firms which released and firms which did not release CFSs in Australia prior to the requirement that firms in that country publish CFSs. The study neither investigated the extent of disclosure in CFSs nor the comprehensiveness of CFSs.
3. However, as the next illustration and Bahnson et al. (1996, pp. 2–6) suggest, the indirect method does not provide an explicit proof of the arithmetic accuracy of the net operating profit figure because of the general impossibility for the user to understand and verify the make-up of

the items in the reconciliation of the net OCFs figure with the net operating profit figure by tracing those items to the differences between the opening and closing balances of the components of working capital.

4. From conversations with many UK corporate reporters, it was suggested to us that the phenomenon has arisen because many firms do not have their accounting systems set up to produce cash flow numbers directly. We doubt the intuitive validity of this explanation because our study was situated in 1995, 5 years after the ASB required the publication of cash flow statements. In addition, the results of our enquiries in Australia and New Zealand, where the direct method has been mandated, suggest that firms have not installed a system for producing cash flow numbers directly. Instead, the firms told us that their cash flow numbers were derived by working backward from the accounts receivable and accounts payable to arrive at the cash flows from customers and to suppliers respectively.
5. In adjusting for goodwill, we added back the cumulative goodwill written off from equity to make the deflator — book value of equity — comparable across all sample firms.
6. We recognize, however, that one could just as plausibly argue the converse because some firms may release more information when their performance is not favorable. For example, when a firm reports low earnings return on sales, low or negative liquidity and/or negative net cash flow per £ worth of equity, it may release more detailed cash flow information to increase the understanding of its current position and future potential. As a result, some researchers have arrived at the conclusion that it is not possible to speculate on the direction of the relationship between performance-related variables and the indexes of cash flow reporting (Lang and Lundholm, 1993, p. 261; 1996, p. 479; Wallace et al., 1994, p. 47; Wallace and Naser, 1995, p. 332).
7. Our multinationality constructs seek to capture the cash flows from a firm's involvement in foreign countries. These cash flows may arise from the direct and indirect export of the firm's products, the licensing/franchising of the foreign production under the firm's brand name, the acquisition and divestment of a foreign plant, division or subsidiary and/or the raising and retirement of foreign finance.
8. We did not factor "auditor-type" into our study because only 10 of the 200 firms in our sample had auditors that do not fall within the first tier (that is, that are not one or more of the Big-5 firms). As a result, there was no noticeable variation in the auditor-type variable.
9. The full scoring template is available on request from the first author. We recognize that many of the choices made in the construction of the template are arbitrary and that such arbitrariness is almost inevitable in our scoring and so could introduce measurement errors. However, before using this template for scoring, we sent it out to 20 financial analysts operating in the London area so that they could suggest to us whether the items included in the template capture information that they would like to see in published cash flow statements. They were requested to (1) evaluate each item for its relevance to their evaluation of the liquidity and financial viability of the firms they follow (2) assess the reliability of the point scales we attributed to each item and (3) comment on the usefulness of each item when comparing the cash flows of two or more firms. We amended the template in line with the suggestions from the 12 analysts that responded to our request.
10. Our decision to include non-financial information is motivated by the suggestion and findings by Amir and Lev (1996, p. 5) that non-financial information increases the value relevance of corporate disclosure in annual reports.
11. Our researcher-created indexes were developed in a systematic manner. Each of us first evaluated the 1995 annual report of each of 20 randomly-selected firms from our sample, in turn. We compared our results and reconciled our differences and agreed on the overall score. We then distributed the annual reports of the remaining 180 firms equally, among ourselves, for

separate evaluations. As a control device, each of us audited the scoring of the other by checking the scores awarded by the other person to a random sample of 20 out of the 60 firms allocated to each person. Although this procedure cannot adequately surrogate for the ratings which those who use annual reports on a regular basis may award to each of the firms in our sample, we believe that our control procedure ensures internal validity.

12. We caution that our unweighted scores did not give credit for differential details provided by each sample firm on each item of CFS information. The unweighted procedure, therefore, fails to take full account of the informativeness and usefulness of the CFS to any specific end-user. Modern attempts to measure the "quality" (or comprehensiveness) of disclosure now take cognizance of the differences in the nature of the details provided in the annual reports of sample firms (see, for example, Botosan, 1997, pp. 333–334).
13. We compared the mean market capitalization values of the responding firms with those of the non-responding firms, using a two-tail student's $t$-test and did not discover any potential for self-selection bias, because the $p$-value was 0.1235.
14. We tested the robustness of the template by applying it to the cash flow information in the annual reports of the sample firms for the year 1994. The test was motivated by our expectation of similar results for the years 1994 and 1995, because corporate disclosure policies and practices tend to remain relatively constant from year-to-year in order to enhance the year-to-year comparability of those statements and to avoid substantial year-to-year variation (Wallace and Naser, 1995, p. 332, note 14). The Spearman's rank correlation coefficient of 0.9912, the Kendall's rank correlation coefficient of 0.9917 and the normal approximation test that the rank correlation is zero suggest that the ranking of the firms for both years is in the same order. It is important to note, however, that Rajan and Sarath (1996, p. 380), in analyzing whether there exists a limit to voluntary disclosure, have recently suggested that "information extent is dictated by the provider's preferences and the requirement of efficient prices and is independent of the set of signals available to the provider."
15. FRS 1 (1991) was revised in October 1996 and the provisions of the revised standard commenced with accounting periods ending on or after 23 March 1997, though early adoption was encouraged. As a result, some of our sample firms whose year ends occurred between the date the revised standard was published (October 31, 1996) and 23 March 1997 adopted the provisions of the revised standard. In order to avoid the confounding effect of the mixture of annual reports issued by early adopters in 1996 with those issued by those who preferred to adopt the revised standard from after the application date, we decided not to investigate annual reports relating to the year 1996 or after.
16. Percentile ranks are used in the regression rather than raw ranks because percentiles are independent of the maximum rank and therefore, more general (Wallace and Naser, 1995, p. 332). Because rank transformations do not alter the relative positions of the firms in the sample, their use would provide a natural mapping of the competitive activity among firms. While rank transformations may remove common, systematic factors that do not disturb the ordering of a data series (Ruefli and Wilson, 1987, p. 642), the magnitude of the variables and of the differences between them is lost (Perry and Cronan, 1986, p. 609). Note, however, that no loss in explanatory power and efficiency has been noticed when ranks were used in place of untransformed data (see Hettmansperger and McKean, 1978, pp. 77–79; Wallace and Naser, 1995, pp. 332); thus suggesting that the possible drawbacks of rank transformation may not apply in all cases, especially when magnitude is not the primary object of study (Kane and Meade, 1997, p. 64) as is true of our present study.
17. Another procedure for dealing with the potential econometric problems which may arise from using dependent and independent variables whose relationships are monotonic and non-linear is to transform the ranks of all the continuous variables into normal scores prior to running the OLS regression procedure (Cooke, 1998). We adopted this normal scores transformation, ran

regression procedures and found that the results were identical to those we obtained using the percentile transformation of the ranks.

18. The low average VIFs we reported in Table 7 may have arisen from our effort to reduce the impact of multicollinearity in the regression analyses by not factoring into any model all the firm size variables. When we did so, the highest VIF (9.92) was close to the threshold figure of 10. In addition, we tested whether the multicollinearity (reported in Table 4) between *tilefsale* (foreign sales) and *tilefop* (number of foreign operations) would affect our results by dropping *tilefop* from the estimation model. The results of this additional estimation do not differ from the one which included the tilefop variable in the first instance.
19. This lack of variation may be due to the nature of cash flow reporting, the stage in its development at which it was studied or the weakness of the scoring template to capture adequately the variation in cash flow reporting. In addition, the simplicity of the concept underlying cash flow reporting may have limited the scope of CFSs' variation among corporate reporters. Finally, FRS 1 (1991) included a set of six illustrative examples which were often followed by reporting companies. The effect of such conformity is to limit the variability in cash flow reporting.
20. We caution the reader against treating our cash flow reporting comprehensiveness construct (which, in essence, is the extent of detail in a CFS) as equivalent to the relevance of the information relating to cash flows. Value relevance (which is not the focus of our paper) of the content of CFSs will differ from one user to another and from one item of information in the CFS to another. However, as a general purpose document, the more information on cash flows in the annual report and accounts, the greater the likelihood that the information would be relevant to many users (see Cheng et al. (1996; 1997) for the results of recent US studies suggesting that SFAS 95 cash flows from operations are value-relevant).

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# Corporate Disclosures Made by Chinese Listed Companies

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**Key Words:** Accounting regulation; Corporate disclosure; China; Developing economies; Financial reporting; International accounting

***Abstract:*** *This paper investigates the current corporate disclosure requirements placed upon Chinese listed companies and the level of compliance with them. Although influenced by the old accounting regime adopted in the planned economy, these recently promulgated requirements represent a significant development towards a market-oriented economy. However, problems still exist, perhaps the most serious one being that these requirements are not based on users' information needs. Nonetheless, the level of compliance appeared to be high largely because these requirements are mandatory. In addition, companies voluntarily disclosed, among others, forecast earnings (largely influenced by traditional practice) and a report of the Supervisory Board (following foreign practice) although the most updated regulations have discouraged the former and made the latter compulsory. Compared with those in the planned economy, some current disclosure practices represent advances while others may be seen as deficiencies.*

Research into corporate disclosure has produced a sizeable literature.[1] Little research of this type has been undertaken in a Chinese setting, however, although corporate disclosure has gained increasing importance following the re-emergence of the capital market. Since public disclosure is vital for an efficient market (Lee, 1987), more research is needed to help improve the Chinese disclosure regime. As more international investors enter the Chinese market, such research is also useful in raising their awareness of the quality of disclosure in China.

This paper describes the current disclosure regime and provides a snapshot of recent disclosure practices using a small sample of annual reports prepared by listed companies. The purpose is to give a preliminary indication of the quality of corporate disclosures (both de jure and de facto) in China. In addition, the paper shows how the latest standards issued by the Chinese Securities Regulatory Commission (SRC) have responded to new

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developments in disclosure practice. As a descriptive study, the paper provides a stepping-stone for further research.

This study differs from the study of Liu and Zhang (1996) which also examined disclosure issues in China. Firstly, it adds a historical dimension which is lacking in their work. In addition, the current study distils the disclosure requirements from all regulatory sources, whereas theirs only concerns those promulgated by the SRC. Finally, this study is based on a review of annual reports, whereas the data source for their work related to disclosure issues is unclear.

A major difficulty with research into disclosure issues in China is the lack of data sources. This is partly because there is no culture of co-operation between companies and researchers and also because the law does not require listed companies to distribute financial reports directly even to shareholders. The lack of data sources has of course been encountered in the current study and it is for this reason that only a small sample of annual reports has been used.[2] Therefore, the findings reported here can only be seen as tentative, not conclusive.

The paper is organized as follows. The next section provides a historical overview of corporate disclosure which is thought to be important for a proper understanding of the current disclosure regulations and practices. This is followed by a description of the current disclosure requirements. The paper then investigates the level of compliance with these requirements. The last section contains some discussions and conclusions.

## THE CHANGING DISCLOSURE REGIME

China operated a planned economic system until the late 1970s when it started its economic reform program and adopted an open door policy. Under the old system, all enterprises were either state-owned or collectively-owned. Both types of enterprise were run directly by the government, with little room for market mechanisms. Government agencies (including the supervising authority of a company, fiscal authority, taxation authority and the state-owned banks) and company management were the only users of financial reports. Company information was channelled to government through three parallel reporting systems: the Ministry of Finance (MoF), the various supervising ministries, and the State Statistics Office. The local or regional offices of these bodies aggregated the information collected from companies, and reported it to provincial offices which, in turn, consolidated the information received and transmitted it to the central offices.

Accordingly, uniform accounting systems (UASs) were designed to serve the government (Xiao et al., 1995). These UASs focused mainly on bookkeeping issues, while other state regulations concentrated on spending control. In both UASs and other state regulations, accounting disclosure was a marginal issue, presumably because all major activities of business enterprises were planned and controlled by the government. The overriding principle was legality (or conformity to the UASs and state regulations). The basic requirements were "true numbers, accurate calculation, complete content and timely reporting."

The distinction between management and financial accounting was only made recently in China. Indeed, there was little difference between internal and external reporting under

the UASs as indicated by the large number of statements prepared for, and the frequency of, external reporting (Bai, 1988). Apart from the balance sheet and income statement prepared monthly, quarterly and annually, companies had to prepare and submit to government many other statements such as a monthly statement of unit cost of main products and an annual statement of profit by product (Tang et al., 1992).

Although the practice of the provision of notes to the accounts did not exist, an explanatory statement of financial conditions (Caiwu Zhuangkuang Shuoming Shu) was prepared quarterly and annually. The statement provided further information related to some items in the main statements and contained a comparison between actual results and plans and a comprehensive ratio analysis. In addition, it normally included forecast financial figures and proposed measures to be taken to improve the company's performance (Lou and Enthoven, 1987).

There was no requirement and no need to disclose accounting policies because these were laid down by the government. Confidentiality was not a problem since all companies were state-owned or collectively-owned and the government and companies' managements were the only users. Similarly, there was little concern about the cost of reporting, as evidenced from the number of statements that were prepared and the frequencies with which the statements were submitted.

Economic reforms and the adoption of the open door policy, however, have resulted in dramatic changes to the disclosure environment. The most important change is the emergence of new forms of business. Apart from the traditional state-owned and collectively-owned companies, there are private companies, Sino–foreign joint-ventures, foreign companies, and share capital-based companies which can be further divided into two types: limited liability companies and share capital limited companies.[3] These forms have resulted in new users of corporate information such as investors and financial analysts.

The second major change has involved the establishment of the Shanghai and Shenzhen Stock Exchanges in 1990 and 1991, respectively. The two markets have expanded steadily[4] and provided direct incentives and pressures for market-oriented financial disclosure (Wang, 1995).

In response to these reforms, a new accounting and auditing regime is emerging. The UASs have been abandoned and are being replaced by new accounting regulations and standards with a market orientation (Xiao et al., 1995; Xiao and Pan, 1997). In addition to the state audit sector, a certified accounting profession has been re-established and is growing steadily (Mo et al., 1995; Xiao and Zhang, 1997). The new accounting and auditing regime, summarized in Table 1, is briefly described below.

It can be seen from Table 1 that a number of basic laws have been stipulated by the National People's Congress which represents the ultimate source of power. These include: (1) the Law for State-owned Industrial Enterprises (1988) which regulates state-owned companies by defining their structures of corporate governance and relationships with the government; (2) the Accounting Law (1985, revised in 1993) which contains the basic accounting regulations applicable to all forms of business; (3) the Law on Certified Public Accountants (1993) which governs the private auditing profession; (4) the Auditing Law (1995) which regulates governmental auditing; and (5) the Company Law (1993) which deals with share capital-based companies and provides some rules on accounting and finance issues.

**Table 1.** The Chinese Accounting Regime: Regulators, Regulations and Applicable Enterprises

| *Regulator* | *Main regulation* | *Applicable enterprise* |
|---|---|---|
| The National People's Congress | The Accounting Law (1985, revised in 1993) | All enterprises |
| | The Auditing Law (1994) | Solely state-owned organizations |
| | The Law on Certified Public Accountants (1993) | Auditing profession |
| | The Law for State-owned Industrial Enterprises (1988) | State-owned companies |
| | The Company Law (1993) | Share capital-based companies |
| The State Council | Tentative Regulations on the Management of the Issuing and Trading of Securities (1993) | Share capital-based companies |
| The Ministry of Finance | Accounting Standards for Business Enterprises (1992) | All enterprises |
| | General Rules on Business Financial Management (1992) | All enterprises |
| | Industry specific accounting systems (1992) | Enterprises in relevant industries |
| | Independent Auditing Standards (since 1995) | All enterprises |
| The Securities Regulatory Commission | Implementing Rules on Information Disclosure by Public Issuing Companies (Trial) (1993) | Public issuing companies |
| | Standards of Contents and Formats of Information Disclosure by Public Issuing Companies (No. 1–No. 6) (1994, 1997, 1998) | Public issuing companies |

Under the People's Congress, the State Council has also promulgated regulations on a number of important issues; for example, the Tentative Regulations on the Management of the Issuing and Trading of Securities (TROMITS) (1993) contains provisions relating to information disclosure.

The State Council has established two main bodies responsible for accounting and reporting affairs. One is the MoF empowered to manage accounting affairs. It issued the Accounting Standards for Business Enterprises (ASBE) in 1992 as a set of basic accounting standards and a conceptual framework to underpin specific standards (Xiao and Pan, 1997). To help implement the ASBE, the MoF designed industry-specific accounting systems including the Accounting System for Experimental Share Capital-Based Enterprises (ASFE).[5] Recently, it has issued auditing standards,[6] prepared by the Chinese Institute of Certified Public Accountants (CICPA). The other body is the SRC, established by the State Council in response to the development of stock exchanges. The SRC issued the Implementing Rules on Information Disclosure by Public Issuing Companies (IRID) (1993) and the Standards of Contents and Formats of Information Disclosure by Public Issuing Companies (SOCFID) (No. 1–No. 6) (1994, 1997 and 1998).[7]

As part of the new accounting and auditing regime, new disclosure requirements have been prescribed. These are examined more fully in the next section.

## NEW DISCLOSURE REQUIREMENTS

The main sources of disclosure requirements are:

- the Accounting Law (1993),
- the Company Law (1993),
- the ASBE (1992),
- the TROMITS (1993),
- the (Trial) IRID (1993),
- the ASFE (1992), and
- the SOCFID (No. 1–No. 6) (1994, 1997 and 1998).

The disclosure requirements can be placed into four categories: initial disclosure, periodic disclosure, non-periodic disclosure, and other disclosure. The first three laws and regulations listed above deal with periodic reporting, whereas the other four regulations or standards involve all types of disclosure to be made by public issuing companies. This paper concentrates on those requirements for periodic reporting especially annual reports.

### General Requirements for Periodic Reporting

The Accounting Law (1993) requires every organization to prepare financial statements based on its accounting records in accordance with the accounting system defined by the State. The ASBE (1992) prescribes three main financial statements to be prepared by business enterprises, namely the balance sheet, the income statement and the statement of changes in financial position or cash flow statement. The three statements should be supplemented by supporting schedules, notes, and an explanatory statement on financial conditions.

The ASBE requires: (1) the main statements to be prepared yearly, quarterly and monthly, to meet the standard of "true numbers, accurate calculation, complete content and timely reporting," and to include comparative figures for the previous period if appropriate; (2) consolidated statements to be compiled when a company owns 50% or more of the total capital of another enterprise, or has control over that enterprise; and (3) the use of the Chinese currency. The ASBE further requires, by way of notes, the disclosure of accounting methods adopted; changes in accounting methods and their causes and effects on financial performance and position; unusual items; disaggregated data for certain important items; and other information which would help users' understanding and analysis of the statements. While these requirements should be observed by all types of enterprise, the ASFE (1992), largely consistent with the ASBE, prescribes requirements for share capital-based companies.

The Company Law (1993) requires all share capital-based companies to prepare an audited financial report at the end of the year. A limited liability company should provide

the report to its shareholders whereas a share capital limited company is required to display the report at its registered office prior to the annual general meeting (AGM) so that shareholders can consult it. A public issuing company has to publish its report (no medium is specified, however).

The TROMITS, the IRID, and the SOCFID also prescribe periodic disclosure requirements for public issuing companies. A public issuing company should prepare both an interim report[8] (within 60 days after the first 6 months of the year) and an annual report (within 120 days of the end of the year), submit 10 copies to the SRC, publish an abstract in at least one national newspaper approved by the SRC, and deposit the reports and abstract in the company's registered office and with the relevant stock exchange and securities trading agents for public consultation. Note that listed companies are not required to send their periodic financial reports to shareholders.

In addition, the IRID requires the disclosure of information to the public in Chinese, but allows those which issue B shares to use both Chinese and English. In the latter case, the Chinese version prevails if any difference exists between the two versions. If the information is related to financial accounting, legal affairs, or asset valuation, it (unless otherwise permitted) must be verified by qualified accountants, solicitors, and asset valuation agents, respectively. Promoters and directors must ensure that there are no fraudulent or seriously misleading statements contained in their publicly disclosed information, or any important omissions therefrom.

Interestingly, some requirements of the traditional accounting regime are inherited, thereby demonstrating its continued influence. Examples include the general requirement of "true numbers, accurate calculation, complete content and timely reporting" and the frequency of reporting prescribed in the ASBE which clearly follows the old practice. In particular, the requirement for the preparation of monthly and quarterly reports for external users indicates that the ASBE does not clearly distinguish internal reporting from external reporting. This could also be seen as a result of the influence of the traditional practice.

Differences exist between the above-mentioned laws, regulations and standards. For example, both the ASBE (1992) and Company Law (1993) require the inclusion of an explanatory statement on financial conditions in the annual report, whereas the TROMITS, the IRID, and the SOCFID require the preparation of a Chairman's Statement and a Directors' Report. Presumably, the Chairman's Statement and the Directors' Report are meant to replace the explanatory statement on financial conditions. Clearly, the ASBE and the Company Law bear the influence of the UASs. In contrast, the TROMITS, the IRID and the SOCFID are a step closer to disclosure requirements in the UK and US.

## Content Requirements For Annual Reports

The first column of Appendix A charts the detailed requirements regarding annual reports which are categorized into the following sections:

- Brief introduction of the company
- Three-year summary of accounting and operations data

- Chairman or managing director's statement
- Directors' report
- Financial statements
- Statement of material events
- Description of related companies
- Notice of the AGM
- Other information
- Reference information

A number of characteristics emerge form these detailed requirements: (1) the focus is on the company's short term (rather than long term) objectives and strategies; (2) there is an emphasis on disclosure of technological innovation; (3) although discussion is required of the company's immediate industry, the wider political, social, and demographic context is largely neglected; (4) an emphasis is placed on reporting material events and legal proceedings; (5) business opportunities and risks do not feature as important; (6) little emphasis is placed on the competitive market forces that influence the company's businesses; (7) the requirements for segmental reporting are lenient; (8) corporate governance is treated lightly; and (9) the requirements relating to financial statements are relatively simple.

It should be noted that the SOCFID No. 2: The Annual Report was updated in December 1997. This standard has brought about four major changes. Firstly, it requires the inclusion in the annual report of the Supervisory Board's Report and an Introduction of the AGM held. In addition, it discourages the disclosure of forecasts by explicitly stating that the company is not required to disclose annual earnings forecasts but that, if a forecast is disclosed, it must be reviewed by qualified auditors. Furthermore, greater guidance is now provided for the preparation of the Abstract of the Annual Report to be published in the newspapers permitted by the SRC and for the preparation of Notes to the Accounts. Finally, in response to the emergence of new economic developments, the disclosure as material events of mergers, acquisitions, assets re-organisations, and related party transactions is now required. Most of these changes are a response to new developments in existing disclosure practice as demonstrated below.

## CORPORATE DISCLOSURE PRACTICES

This section investigates the level of compliance by listed companies with current disclosure requirements excluding the new requirements contained in SOCFID No. 2 (1997) because these were not applicable to the data set used here. A sample of 13 Chinese companies was drawn from Shanghai and Shenzhen Stock Exchanges' Security Quotations Lists (Weekly), published in the national newspaper, China Securities, 8 July 1996. A copy of the latest annual reports (for 1995) prepared by these companies was obtained in July 1996. Some characteristics of the companies and their annual reports are summarized in Table 2.

The 13 annual reports were compared with the disclosure requirements as compiled in Appendix A. The level of compliance is discussed below.

**Table 2.** Characteristics of the Sampled Companies and Their Annual Reports

| Co. | Name | Industry | Total assets (1995, in million yuan) | A/B share | Stock exchange | Date of initial listing | Accounting system | Auditor | Language |
|---|---|---|---|---|---|---|---|---|---|
| 1 | Weifu Fuel Injection | Mechanical engineering | 534 | B | Shenzhen | 95 | Foreign | Foreign | Chinese/ English |
| 2 | Sichuan Tiange Group | Textile | 542 | A | Shenzhen | 93 | Chinese | Chinese | Chinese |
| 3 | Shenzhen Fountain | Conglomerate | 149 | A | Shenzhen | 94 | Chinese | Chinese | Chinese |
| 4 | China Vanke | Properties | 3220 | A/B | Shenzhen | 88 | Foreign | Foreign | English |
| 5 | Shenzhen Seg. Dasheng | Electronics | 521 | A/B | Shanghai | 93 | Chinese | Chinese | Chinese |
| 6 | Guangzhou Pearl River Industrial Development Enterprises | Properties | 763 | A | Shanghai | 88 | Chinese | Chinese | Chinese |
| 7 | Inner Mongolia Yili Industrial | Food | 149 | A | Shanghai | 96 | Chinese | Chinese | Chinese |

*(continued)*

**Table 2.** (Continued)

| *Co.* | *Name* | *Industry* | *Total assets (1995, in million yuan)* | *A/B share* | *Stock exchange* | *Date of initial listing* | *Accounting system* | *Auditor* | *Language* |
|---|---|---|---|---|---|---|---|---|---|
| 8 | Shanghai Vacuum Electron Devices | Electronics | 4353 | A/B | Shanghai | 87 | Chinese/ Foreign | Chinese/ Foreign | Chinese |
| 9 | Shanghai ACE | Conglomerate | 181 | A | Shanghai | 87 | Chinese | Chinese | Chinese |
| 10 | Changchai | Mechanical engineering | 1009 | A | Shenzhen | 94 | Chinese | Chinese | Chinese |
| 11 | Shenzhen Capstone Industrial | Electronics | 283 | A | Shenzhen | 93 | Chinese | Chinese | Chinese |
| 12 | Guizhou Zhongtian | Properties | 374 | A | Shenzhen | 94 | Chinese | Chinese | Chinese |
| 13 | Huaneng Power International | Electricity | 19,569 | N/A | New York | 94 | Foreign | Foreign | English |

### Brief Introduction of the Company

All the reports contained a brief introduction of the companies, in terms of history, the main business and the scale of operations.

### Three-year Summary of Financial and Operations Data

The required items of financial information (except for dividends per share) were provided by almost all companies. Four companies disclosed dividends per share in the income statement. All companies failed to provide in this section the required non-financial and segmental information.

### Chairman's Statement

All companies provided general information about industrial conditions, but only two reported industrial statistics and their sources while five provided some indication of their industry positioning.

Chairmen compared current year results with those of the previous year, rather than with plans as required. Each statement provided some indication of a business development plan for the coming year in terms of overall operational objectives and measures to be taken to achieve them. None, however, contained the required information relating to: fixed asset upgrades; innovation; purchases, research and development of new technology, new design, and new materials; and capital raising.

Most Chairman's statements gave some information (though not systematic) about volumes of products produced and sold and market shares of each type of product. Such information was sometimes expressed in vague terms such as "one of the leading or largest suppliers in the country." About one-half of the chairmen discussed the implementation of product improvement and upgrade and the effects of technology application and improvement.

Most Chairman's statements provided a brief description of the application of the capital raised in the past which was used in the year reported, but very few complied with the requirements to compare actual progress with plans or to compare forecasts with actual income generated from the application of the capital.

### Directors' Report

Most companies provided detailed information about movements in shares and share capital, shareholders, management, and material litigation (a "none" was indicated where applicable). An exception was the company listed on the New York Stock Exchange which made little effort to provide information to meet Chinese requirements.

### Financial Statements

All companies except those who followed foreign generally accepted accounting principles (GAAP) met most of the disclosure requirements. Of the requirements not

complied with, the lack of segmental reporting emerged as the main deficiency. Although all companies should disclose three items of information by lines of business (namely operating revenues, costs, and expenses), only eight disclosed operating revenues and four reported operating costs. None disclosed expenses although four companies disclosed, in a note, revenues, pre-tax profits, and net assets by line of business and geography.

Another noticeable feature was the failure to include the explanatory statement of financial conditions although required by the ASBE and Company Law. Presumably, it was replaced in 10 companies by a brief financial review in the Chairman's statement and notes to the accounts. All the financial reviews by the Chairmen of those 10 companies discussed total assets, liabilities and equity and their changes compared with the previous year's figures. Some also gave the main reasons for changes. Other items required in the explanatory statement of financial conditions were scattered throughout the Chairman's report or notes to the accounts.

## Other Observations and Comments

The disclosure of accounting policies by the companies revealed the existence of some confusion in the choice of a basis for preparing financial statements. A major problem was that some companies followed domestic standards while others followed foreign standards (two companies followed International Accounting Standards, and one US GAAP). Consequently, there was inconsistency in the use of accounting methods. Confusion also existed even among those companies whose financial statements were prepared in accordance with domestic rules. While the basis was the ASBE or the ASFE for some companies, it was both the ASBE and ASFE for others. Confusion could also exist within one company. For example, the holding company might follow the ASBE whereas subsidiaries were more likely to follow industry-specific accounting systems.

A similar problem regarding the adoption of auditing standards was revealed in auditors' reports. Some auditors followed the Chinese Independent Auditing Standards, while a few applied foreign auditing standards (two International Auditing Standards and one US auditing standards). An interesting feature was that all reports prepared by Chinese auditors were signed personally by individuals responsible for the audits, whereas those prepared by foreign auditors were stamped by the auditing firms. There was little difference between the reports in term of content and format. Chinese auditors expressed qualified opinions on the accounting treatments adopted by two companies.

Perhaps the most important feature to emerge from the annual reports reviewed was that six companies explained the main causes of changes in account items between the current year and previous year. The companies which disclosed such information all followed Chinese GAAP. Clearly, these companies inherited the Chinese tradition where causes of changes are explained in the explanatory statement of financial conditions.

An equally important feature is that, for the 10 companies following Chinese disclosure requirements, some of the notes to the accounts were surprisingly detailed.

These companies provided the names of their main creditors or debtors, balances, debt age analysis for accounts receivable, and unsettled transactions with subsidiaries and associated companies (both names and amounts). The main reason for disclosing such detailed information might lie in the fact that the whole economy has, for some time, suffered from cash shortage resulting in large amounts of bad debts incurred by many companies and banks. All 10 companies also disclosed very detailed information on long-term investments. Other items which received detailed treatment in certain of the 10 companies included revenues, stock, construction projects in progress and deferred items.

The annual reports reviewed contained the following additional voluntary disclosures:

- All companies, except those which followed foreign GAAP, included in their annual reports a description of the AGM held,
- Ten companies' annual reports discussed the performance of subsidiaries and controlled companies,
- Nine companies provided, in the notes to the accounts, information about contingent liabilities,
- Four companies provided geographic segmental information and segmental information about pre-tax profits and net assets by industry,
- Seven companies disclosed forecast earnings, revenues and other financial data, and
- Eleven companies included a report of the Supervisory Board.

The inclusion of the report of the Supervisory Board reflects the main feature of the corporate governance system adopted in the country: the two-tier board structure. The reports were generally a matter of formality as none contained any adverse opinion. However, these reports revealed interestingly a variety of activities that the supervisory boards undertook, with the following common to all companies:

- Monitoring whether directors and senior managers violated laws, regulations, the Articles of Association of the company, and shareholders' resolutions,
- Monitoring whether or not directors and senior managers breached their duties, conducted any unlawful activities, or prejudiced the interests of employees and shareholders,
- Checking whether the financial reports and accounts and earnings distribution schedule were legal,
- Reviewing the documents that the Board of Directors intended to submit to the shareholders' meetings, and
- Attending meetings of the Board of Directors.

## DISCUSSION AND CONCLUSION

Economic reforms have created a new corporate disclosure environment with the emergence of new forms of business enterprises and capital markets. Accordingly, the

UASs have been abandoned and accounting, auditing and disclosure standards have been or are being developed. As a result, corporate disclosure, a historically marginal issue, has gained importance on the agendas of accounting regulators and companies. Against this background, this paper has examined the current disclosure requirements and compliance with them by listed companies.

The current disclosure requirements are comprehensive and detailed. However, there is room for improvement. In addition to those weaknesses detailed above, a more serious problem lies in the fact that current requirements are largely based on foreign disclosure standards rather than users' information needs.

Although they are largely modelled on foreign standards, the Chinese disclosure requirements do exhibit some distinguishing features. The most noticeable ones are that they are mandatory and that they do not require listed companies to distribute annual reports to shareholders.

The level of compliance with the mandatory disclosure requirements was naturally at a high level, with the SRC's monitoring also playing an important role in achieving this outcome (Wang, 1995). Many voluntary disclosures could also be found, especially earnings forecasts and the Supervisory Board's report. While further study is needed to establish the actual causes of the voluntary disclosures, the following reasons may be relevant. Some of the voluntary disclosures (such as forecast earnings and detailed information concerning accounts receivable and payable) may be seen as "old habits" (that is, companies used to disclose such information in the old accounting regime). They existed, however, because managers might not be concerned with, or aware of, potential litigation and confidentiality problems arising from such disclosures. It is of course possible that some voluntary disclosures were motivated by a desire to impress investors, the market or regulators. However, other voluntary disclosures (for instance the Supervisory Board Report) might simply be a matter of following foreign practice.

Not all is good news, however. Although the level of compliance was high, companies tended not to disclose important information (for instance, material events) not enumerated in the regulations. This was seen as the most serious problem by Professor J.W. Yang, a leading Chinese accountant,[9] and may be suggestive of the existence of a fundamental problem in the current disclosure standards: the lack of an overriding principle to ensure that a company gives a true and fair view of its performance and conditions.

There were other problems in implementing disclosure requirements. Measures need to be taken to eliminate the confusion arising from the existence of multiple bases for preparing and auditing financial statements. In addition, little segmental information was disclosed. Furthermore, Liu and Zhang (1996) commented on the inadequate disclosure of accounting policies and changes in them, the impact of extraordinary items and post balance sheet date events, and the effect of changes in government policies. They also considered as problems the lack of timeliness, the voluntary nature of the disclosure of forecasts, and the use of insider information.

This study has also produced evidence of an anti-plan syndrome. Companies, perhaps tired of State plans, tended to compare their actual results with those of the previous year, rather than with their plans or forecasts, which had been a common practice in the planned economy. One may argue that this is because

companies are no longer operating under state imposed plans. However, they should have their own plans, and disclosure of these plans and their implementation may be important to investors. In addition, the comprehensive ratio analysis commonly undertaken in the past has virtually disappeared in the annual reports reviewed — they were replaced by random and selected discussion in the Chairman's report.

There has been, nevertheless, some remarkable progress compared with traditional disclosure practice in the planned economy. As an example, all companies in the sample disclosed the main accounting polices adopted and prepared consolidated financial statements. Other changes existed, for instance, the traditional explanatory statement of financial conditions has been replaced by the Chairman's report and notes to the accounts.

The fact that the current disclosure standards are promulgated on the basis of foreign standards must be taken into account when Chinese requirements and the level of compliance with them are assessed. The merits and weaknesses of these standards and the usefulness of disclosure depend on the extent to which these "borrowed" standards are applicable in China. While these standards may have provided a useful initial foundation, further development may benefit from a systematic investigation of users' information needs since compliance with these standards does not necessarily mean that users' needs are met.

In assessing the results of this study, one should also bear in mind the fact that it is based on a small sample and hence some findings, especially those related to the level of compliance, may not be generalizable. In addition, it is confined to disclosures made in annual reports and does not cover interim reports and other disclosures. As only listed companies were examined, the findings may not be applicable to non-listed companies.

A further limitation lies in the fact that the paper has not examined the level of compliance with the updated SOCFID No. 2. Thus, the current study represents a snapshot of disclosure practice. Nevertheless, it provides evidence on the ways in which standard setting responds to disclosure practice. For example, the new requirements for the inclusion in the annual report of the Supervisory Board's Report and an Introduction of the AGM held are a codification of existing voluntary disclosures. However, the new standard discourages the disclosure of forecast earnings presumably because of the danger of such revelations for both the reporting entity and users.

Further research should be directed towards assessing the usefulness of corporate disclosure and testing the relationship between disclosure quality and firm-specific characteristics. The latter type of investigation, of course, represents a long research tradition in the accounting literature (see, for example, Wallace and Naser, 1995).

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## APPENDIX A.

### The List of Disclosure Requirements of Annual Reports (China)

| Disclosure Requirement | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1. Brief introduction of the company** | | | | | | | | | | | | | |
| *history and developments* | * | * | * | * | * | * | * | * | * | * | * | * | * |
| *main businesses* | * | * | * | * | * | * | * | * | * | * | * | * | * |
| *features and scale of operations* | * | * | * | * | * | * | * | * | * | * | * | * | * |
| **2. Three-year summary of accounting and operations data** | | | | | | | | | | | | | |
| *Financial information* | | | | | | | | | | | | | |
| net operating revenues | * | * | * | * | * | * | * | * | * | * | * | * | * |
| profit after tax | * | * | * | * | * | * | * | * | * | * | * | * | * |
| total assets | * | * | * | | * | * | * | * | * | * | * | * | |
| owners equity | * | * | * | * | * | * | * | * | * | * | * | * | |
| earnings per share | * | * | * | * | * | * | * | * | * | * | * | * | |
| net assets per share | | * | * | | * | * | * | * | * | * | * | * | * |
| dividends per share | | | | * | | | | | | | | | |
| ratio of earnings to net assets | * | * | | * | * | * | * | * | | * | * | * | |
| *Non-financial information* | | | | | | | | | | | | | |
| quantity of goods sold | | | | | | | | | | * | | | |
| market share | | | | | | | | | | | | | |
| average employee productivity ratio in physical units | | | | | | | | | | | | | |
| *Segmental data* | | | | | | | | | | | | | |
| % of revenues from each main operating business to total revenues | | | | | | | | | | | | | |
| % of revenues from each main geographic area to total revenues | | | | | | | | | | | | | |
| **3. Chairman's statement** | | | | | | | | | | | | | |
| *an operations review* | | | | | | | | | | | | | |
| review of the company's operations | | | | | | | | | | | | | |
| progress achieved in the reporting year | * | * | * | * | * | * | * | * | * | * | * | * | * |
| comparison of actual performance and operating objectives | | | | | | * | * | | | * | | | * |
| volumes of each type of products produced and sold | * | | * | | * | | * | | * | * | * | * | |
| market share of each type of products | * | | | | * | | | * | | * | * | * | * |

## The List of Disclosure Requirements of Annual Reports (China) - Continued

| Disclosure Requirement | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3. Chairman's statement (continued)** | | | | | | | | | | | | | |
| progress of construction projects | * | * | | * | * | | | | * | | | * | * |
| revenues from and expenditure on services | | * | | | | | | | | | | | |
| the implementation of product improvement plans | * | * | | | | | * | * | | * | | | |
| effects of technology application | * | * | | | | | * | * | | * | * | | |
| technology improvement and upgrade | * | * | | | | | | * | * | * | | | * |
| change in number and quality of employees | * | * | | * | * | * | * | | * | * | | * | |
| problems and difficulties emerged and measures taken | * | | | | * | | | * | | * | | | |
| other company specific information, such as overseas development, consumption of state controlled resources, foreign exchange balance, copyright and patent that affect the company | * | | | | | | | * | | | | * | * |
| businesses in different industries with of 10% of total revenues | | * | * | * | * | * | * | * | * | * | * | * | |
| the industries in which the company earn 10% of total revenues | * | * | | * | * | * | * | * | | * | | * | |
| % of revenues from different geographical areas | | | * | * | * | | | | | | # | | |
| brief introduction of the industry | | | | | | | | | | | | | |
| overall conditions | * | * | | * | * | * | * | * | | * | | * | |
| relevant state industrial policies | | | | * | | * | | | | * | | * | |
| main statistics and their sources | * | | | | | | | * | | | | | |
| company's position in the industry (e.g., sales ranking) | * | * | | | | | | * | | * | | * | |
| *an explanation of the variances between the actual results and the forecast (lower by 20% or higher by 50% than the forecast)* | | | | | | * | * | | | * | | | * |

## The List of Disclosure Requirements of Annual Reports (China) - Continued

| Disclosure Requirement | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **3. Chairman's statement (continued)** | | | | | | | | | | | | | |
| *a description of the application of the capital raised in the past which were being used for projects in progress in the reporting year* | * | n | | | * | * | * | | * | * | | * | * |
| funds injection | * | n | | | * | * | * | | * | * | | | |
| comparison of actual progress and plan | * | | | | * | | | | | * | | * | |
| comparison of income from the projects with forecast | | | | | | * | | | | | | * | |
| *business development plan for the coming year* | | | | | | | | | | | | | |
| overall operations objectives | * | * | | * | * | * | * | * | * | * | * | * | * |
| measures to be taken to achieve the objectives | * | * | | * | * | * | * | * | * | * | * | * | * |
| fixed assets upgrade, innovation and purchases | | | | | | | | | | | | | |
| R&D of new technology, new design, and new materials | | | | | | | | | | | | | |
| forecast progress of the projects underway | * | * | * | * | | | | * | | | * | | * |
| change in number and | | | | | | | | | | | | | |
| quality of employees | | | | | | | | | | | | | |
| capital raising | | | | * | | * | * | | * | * | | | |
| *other information deemed necessary by the company or its stock exchange* | | | | | | | | | | | | | |
| **4. Director's report** | | | | | | | | | | | | | |
| *an abstract of main points* | * | * | | * | * | * | * | * | * | * | * | * | |
| *shares and shareholders (at least)* | | | | | | | | | | | | | |
| movement in shares and share capital | | | | | | | | | | | | | |
| share issuing and listing | * | n | * | * | n | * | * | | * | * | * | * | |
| change in value and number of total shares resulted from new issue, rights issue, scrip issue, and share division, etc. | * | n | * | * | * | * | * | * | * | * | * | | |
| the highest and lowest price during the year, opening price on the first day of the year, closing price on the last day of the year, and exchange volume of the year | * | * | * | * | * | * | | * | * | * | * | * | |

## The List of Disclosure Requirements of Annual Reports (China) - Continued

| Disclosure Requirement | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4. Director's report (continued)** | | | | | | | | | | | | | |
| change in the ratio of net assets per share in the last three years | * | * | * | | * | * | * | * | * | * | * | * | |
| shares purchase or written off by the company in the year | | | | * | | | | | | | * | | |
| employee shareholding | * | | * | * | | n | * | | * | | * | | |
| shareholders | | | | | | | | | | | | | |
| ownership structure(%): state, legal entity, individual, foreign holders | * | * | * | * | * | * | * | * | * | * | * | * | * |
| total number of shareholders, and its structure | * | * | * | * | * | * | * | * | * | * | * | * | |
| main shareholders (5% of shares holders or the largest 10) | * | * | * | * | * | * | * | * | * | * | * | * | * |
| employee shareholders | | | | | | | | | | | * | | |
| *the management* | | | | | | | | | | | | | |
| names, gender, ages, positions, terms, and specialism | * | * | * | * | * | * | * | * | * | * | * | * | p |
| change | | * | * | * | * | * | | * | * | * | | | |
| shareholdings and changes | * | * | * | * | * | * | * | * | * | * | * | * | |
| remuneration | * | | * | | | * | * | * | | | * | * | |
| personal identity numbers | | | | * | | | | | | | | | |
| *material litigation cases* | | | | | | | | | | | | | |
| details of the cases which took place after the issue of the interim report and have not yet included in the material event report | | | * | | | | | | | | | | |
| progress or verdicts of the cases which were included in the interim report, but had not been concluded. | | | | | | | | | | | | | |
| cases where the company's directors, supervisors, and senior managers were detained for criminal investigation and have been charged of criminal offence, or more serious cases | | | | | | | | | | | | | |
| disclose "no material legal cases" if none | * | * | | * | * | * | * | * | * | * | * | * | * |

**The List of Disclosure Requirements of Annual Reports (China) - Continued**

| Disclosure Requirement | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **4. Director's report (continued)** | | | | | | | | | | | | | |
| cases which will probably take place | | | | | | | | | | | | | |
| **5. Financial statements** | | | | | | | | | | | | | |
| *The balance sheet* | | | | | | | | | | | | | |
| Asset | | | | | | | | | | | | | |
| types of current asset should be shown separately: cash, bank, short term investments, accounts receivable, prepayments, stock, etc. (ASFE) | * | * | * | * | * | * | * | * | * | * | * | * | * |
| marketable securities shall be recorded at their historical cost, and disclosed in book values (ASBE) | * | * | * | | * | * | * | * | * | * | * | | * |
| provision for bad debts may be set up and shown as a deduction of accounts receivable (ASBE) | * | * | * | | * | * | * | * | * | * | * | * | |
| inventories shall be disclosed at historical cost (ASBE) | | * | * | * | * | * | * | * | * | * | * | * | * |
| shares, bonds and other investments shall be disclosed separately at book value (ASBE) | | * | * | | * | * | * | * | * | * | * | * | |
| bonds investments due within a year shall be disclosed separately as a current asset (ASBE) | n | * | n | * | n | * | n | * | * | * | n | n | |
| market values at the end of the reporting period of short term and long term investments in shares and bonds shall be disclosed in notes (ASFE) | | | | * | * | | * | | * | | | * | * |
| original values, accumulated depreciation, and net values of fixed assets should be disclosed separately (ASBE) | * | * | * | * | * | * | * | * | * | * | * | * | * |
| actual expenditure incurred in acquiring or technically transforming fixed assets shall be disclosed separately as construction in progress (ASBE) | * | * | * | * | * | * | * | * | * | * | * | * | * |

## The List of Disclosure Requirements of Annual Reports (China) - Continued

| Disclosure Requirement | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5. Financial statements (continued)** | | | | | | | | | | | | | |
| all intangible assets shall be amortised evenly and disclosed with the unamortized balances (ASBE) | | * | * | * | * | * | * | * | * | * | * | * | |
| all deferred assets shall be shown separately (ASBE) | | * | * | * | * | * | * | * | * | * | * | * | |
| Liability | | | | | | | | | | | | | |
| types of current liabilities shall be shown separately: short term loans, notes, accounts payable, accruals, dividends, other short term debts, etc. (ASFE) | * | * | * | * | * | * | * | * | * | * | * | * | * |
| long term liabilities shall be disclosed by item of long term loans, bonds, and other long term debts (ASBE) | * | * | * | * | * | * | * | * | * | * | * | * | * |
| long term liabilities due within a year shall be disclosed separately as current liabilities (ASBE) | * | * | * | * | n | * | * | * | * | * | * | * | n |
| Equity | | | | | | | | | | | | | |
| invested capital, capital reserve, surplus reserve, collective welfare fund, and undistributed profit shall be disclosed separately | * | * | * | * | * | * | * | * | * | * | * | * | |
| *The income statement* | | | | | | | | | | | | | |
| distinguish between revenues from major activities and those from from non major activities (ASFE) | * | * | * | | * | * | * | * | * | * | * | * | |
| components of profits (revenue, cost, expense, taxation) shall be disclosed separately (ASBE and ASFE) | * | * | * | | * | * | * | * | * | * | * | * | * |
| revenues and expenses arising from non-recurring and unusual activities shall be disclosed separately (ASFE) | * | * | * | | * | * | * | * | * | * | * | * | |

## The List of Disclosure Requirements of Annual Reports (China) - Continued

| Disclosure Requirement | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5. Financial statements (continued)** | | | | | | | | | | | | | |
| selling expenses, administrative expenses, financial expenses, and purchase expenses shall be disclosed separately (ASFE) | | * | * | | * | * | * | * | * | * | * | * | |
| *The statement of profit distribution (ASFE)* | | | | | | | | | | | | | |
| distribution of profits shall be shown separately | | | | | | | | | | | | | |
| profit available for distribution | * | * | * | * | * | * | * | * | * | * | * | * | |
| taxation | * | * | * | * | * | * | * | * | * | * | * | * | |
| statutory surplus reserve | * | * | * | * | * | * | * | * | * | * | * | * | |
| collective welfare fund | * | * | * | * | * | * | * | * | * | * | * | * | |
| discretionary and other surplus reserve | * | * | * | * | * | * | * | * | * | * | * | * | |
| dividends declared or to be declared for shareholders | * | * | * | * | * | * | * | * | * | * | * | * | |
| retained profit brought forward | * | * | * | * | * | * | * | * | * | * | * | * | |
| transfer in or from reserves | | | | * | | | | | | | | | |
| retained profit carried forward | * | * | * | * | * | * | * | * | * | * | * | * | |
| the distribution plan yet to be approved shall be disclosed in a note | | * | | | | | | | | | | | |
| *Segment statement by lines of business (ASFE)* | | | * | * | * | * | | | * | * | * | * | |
| operating revenues | | | * | * | * | * | | | * | * | * | * | |
| operating cost | | | * | | * | | | | | * | * | * | |
| operating expenses | | | | | | | | | | | | | |
| *The statement of changes in financial position or cash flow statement (ASBE)* | * | * | * | * | * | * | * | * | * | * | * | * | |
| sources of working capital shall be divided into profit sources and other sources | | * | * | | * | * | * | * | * | * | * | * | |
| application of working capital is broken into profit distribution, and other applications | | * | * | | * | * | * | * | * | * | * | * | |

## The List of Disclosure Requirements of Annual Reports (China) - Continued

| Disclosure Requirement | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **5. Financial statements (continued)** | | | | | | | | | | | | | |
| *Notes to the accounts (ASBE, and Company Law)* | | | | | | | | | | | | | |
| accounting methods adopted | * | * | * | * | | * | * | * | * | * | * | * | * |
| change in accounting methods | | | | | | | | | | | | | * |
| causes to the change | | | | | | | | | | | | | * |
| effects of the change on financial performance and position | * | | | * | | | | | | | | | * |
| unusual items | | | | | | | | | | | | | |
| disaggregated data about some important items | * | * | * | * | * | * | * | * | * | * | * | * | |
| other information which would help users' understanding and analysis | | | | | | | | | | | | | |
| *An explanatory statement of financial conditions (ASFE and ASBE)* | # | # | | | # | # | # | # | # | # | | # | # |
| production and operations | | | | | | | | | | | | | |
| profit or loss making and distribution | | | | | | | | | | | | | |
| asset turnover | | | | | | | | | | | | | |
| capital structure and its change | # | # | | | # | # | # | # | # | # | | | |
| payment of taxes and rates | | | | | | | | | | | | | # |
| change in accounting and reporting method | | | | | | | | | | | | | |
| contingent items and commitments | | | | | | | | | | | | | |
| other accounting and financial issues | | | | | | | | | | | | | |
| *Consolidated statement* | | | | | | | | | | | | | |
| consolidated statements when it owns 50% or more of another entity's total issued shares, or subsidiary's statements attached if exempt | | | | | | | | | | | | | |
| if ownership less than 50%, disclose minority interest | | * | * | * | * | * | | * | * | * | * | * | |
| *Comparative figures for the previous period (adjusted if necessary)* | * | * | * | * | * | * | * | * | * | * | * | * | * |
| *Reviewed earnings forecast for the coming new year* | | | | | | | | | | | | | |
| *The auditor's report* | * | * | * | * | * | * | * | * | * | * | * | * | * |

### The List of Disclosure Requirements of Annual Reports (China) - Continued

| Disclosure Requirement | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **6. Statement of material events** | * | * | * | * | * | * | * | * | | * | * | | |
| **7. Description of related companies** | * | * | * | * | * | * | * | * | * | * | * | * | * |
| **8. Notice of the AGM** | | | | | * | | | | | | | | |
| *important matters submitted to shareholders for review or approval* | | | | | * | | | | | | | | |
| **9. Other information** | | | | | | | | | | | | | |
| *change of auditors* | * | | | | | | | | | | * | | |
| *change of solicitors* | | | | | | | | | | | * | | |
| *newspapers chosen for disclosure or change of newspaper* | * | | | | | | | | | | * | | |
| **10. Reference information** | | | | | | | | | | | | | |
| *business name* | * | * | * | * | * | * | * | * | * | * | * | * | * |
| *registration number* | * | * | * | | | * | * | * | * | * | * | * | |
| *taxation number* | * | * | * | | | * | * | * | * | * | * | * | |
| *stock exchange number* | * | * | * | * | | * | | * | * | * | * | * | * |
| *names of the appointed certified accountants and solicitors* | * | * | * | * | * | * | * | * | * | * | * | * | * |
| *officer responsible for information disclosure* | * | * | | * | * | * | * | * | | * | * | | |

*Key:* * — disclosure found in annual reports prepared by Chinese companies, n — not applicable, and # — disclosed as part of the Chairman's report instead of the financial report, p — partially disclosed.

## NOTES

1. Research into corporate disclosure has been undertaken from a number of angles, such as (1) adequacy against a defined purpose (Buzby, 1974), (2) comprehensiveness, that is, the degree of details provided about selected items (Wallace and Naser, 1995), (3) informativeness, i.e., whether reported earning figures can be used to predict changes in share prices or future earnings (Alford et al., 1993), (4) timeliness (Whittred, 1980), and (5) extent, i.e., number of items disclosed (Gray et al., 1991).
2. Requests were made, in a separate effort, to a much larger sample of companies, for their annual reports. But no response was received. Similarly, the Accounting Club of Peking University wrote to over 40 companies for their annual reports, but only received one response (Peking University Accounting Society, 1996).
3. According to the Company Law 1993, the limited liability company refers to any legal business entity whose capital is contributed by more than two shareholders, each of which has limited liability for the company's debts up to the value of the total assets owned. The share capital need not be broken down into equal denomination shares, and the company does not issue shares to the investors, but a capital contribution certificate to confirm investors' investments and ownership. In contrast, the share capital-limited company is a legal business entity which divides all its registered capital into equal denomination shares and then raises its capital by issuing

shares. The shareholders assume limited liability to the company on the call up value of the shares subscribed, and the company assumes limited liabilities for its debts up to the value of total assets owned.

4. Up to the end of June 1996, the Shanghai Stock Exchange had 558 members with over 3,000 retail outlets throughout the country and 224 listed companies with 440 types of security; the Shenzhen Stock Exchange had 539 members nation-wide and 157 listed companies with 184 kinds of security (SRC, 1996). In Shanghai market, there were 217 types of A shares which are issued to domestic investors, denominated, bought, and traded in Chinese RMB (Renminbi), and 39 types of B shares which are issued to overseas investors and are denominated in Chinese RMB, but bought and traded in US dollars. The corresponding numbers were 157 and 35 for the Shenzhen market. In order to raise overseas funds, a number of companies have their shares listed on the Hong Kong Stock Exchange (called H shares) and other foreign markets.
5. The industry-specific accounting systems, designed to implement the ASBE, are The Accounting Systems for (1) Industrial Enterprises, (2) Commercial Enterprises, (3) Postal and Telecommunications Enterprises, (4) Transportation Enterprises, (5) Banks and Financial Services, (6) Tourism Services, (7) Construction Enterprises, (8) Foreign Economic Co-operation Enterprises, (9) Agricultural Enterprises, and (10) Experimental Share Capital-Based Enterprises.
6. The auditing standards include (1) Preface to Independent Auditing Standards (IAS); (2) IAS No. 1: General Standard; (3) IAS No. 2: the Engagement Letter; (4) IAS No. 3: Audit Planning; (5) IAS No. 4: Audit Sampling; (6) IAS No. 5: Audit Evidence; (7) IAS No. 6: Working Papers; (8) IAS No. 7: the Audit Report. Although the CICPA has been involved in the development of auditing standards, it has no involvement in accounting standard setting.
7. The disclosure standards are: No 1: Contents and Format of Prospectus (Trial) (1994); No. 2: Contents and Format of Annual Report (Trial) (1994); No. 3: Contents and Format of Interim Report (Trial) (1994); No. 4: Contents and Format of Right Issue Particulars (Trial) (1994); No. 5: Contents and Format of the report on Change of Share capital (Trial) (1994); and No. 6: Contents and Format of Legal Opinion by Solicitors and Solicitors' Working Report Related to the Opinion (Trial) (1994). Among these standards, No. 2 and No. 3 were updated and became formal regulations in December 1997 and June 1998, respectively.
8. The interim report should include at least the following items: (1) financial statements in either simplified or complete form, and notes to the accounts; (2) an operations review and outlook; (3) a statement of material events occurred in the reporting period; (4) change in shares and capital structure; and (5) a brief description of any temporary meetings of shareholders. The disclosure standard regarding interim reports updated in June 1998 requires the disclosure of main financial figures and ratios and the inclusion of a statement of the Board of Directors that the Interim Report does not contain any missing, false and misleading representations and the Board is severally and jointly responsible for the report to be true, accurate and complete.
9. The author conversed with Professor J. W. Yang, the former Director of the Accounting Affairs Bureau, the Ministry of Finance, at the International Forum on Accounting Issues in China, Beijing, China, July 10–12, 1997.

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# Determinants of Audit Fees: The Importance of Litigation, Disclosure, and Regulatory Burdens in Audit Engagements in 20 Countries

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**Key Words:** Audit fees; International auditing; Litigation; Regulation

***Abstract:*** *The majority of previous audit fee research has focused on fees and their determinants in individual countries. This paper combines fee observations from 20 countries into a single sample. The benefit of aggregating fee observations from differing countries is the opportunity to examine the effects of variables such as litigation and regulation, which vary across, but not within a given country on audit fees. Hence, the focus of this paper is on "macro" determinants of audit fees. The results indicate that increased litigation pressures, institutional traditions of increased disclosure, and increased regulation put upward pressures on audit fees. This paper establishes the role of those variables in the determination of fees, integrating an international perspective in the examination of audit fees.*

The purpose of this paper is to examine the effects of variation in the overall macro-economic/political environment on the market for audit services. Understanding the determinants of audit fees which vary across (but not within) international borders should expand our knowledge of the increasingly interdependent global economy, especially as it relates to auditing and accounting. Further, it will also increase our knowledge of the economics of auditing — particularly, in light of macro-economic variables which are theoretically important in the determination of audit fees, but which have been largely unexplored. While a considerable amount of research addresses understanding the micro-economic underpinnings of the markets for audit services in individual countries (e.g., Simunic, 1980; Firth, 1985; Simon, 1995; Simon and Taylor, 1997; Taylor, 1997; Taylor et al., 1999), the vast majority of studies have been conducted in isolation. That is, they examine fees from audit engagements conducted within the borders of a single country, omitting any consideration of determinants of fees which vary across international

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borders. Further, because a number of potential determinants of audit fees *do* vary across international borders, but not within these markets, a significant gap in the literature remains.

Several reasons may have contributed to the limited research in this area. First, samples of fees from individual countries have not generally been readily available despite the fact that fees are published in annual reports in a number of countries. Second, even in cases where samples could be compiled, problems associated with differing currencies making inter-country comparisons and generalizations unattainable. The increasing accessibility of research tools — such as the Standard and Poor's Global Vantage (SPGV) database — that contain observations of audit fees and the associated financial statement components in common databases helps overcome such difficulties. Third, the current study's contribution is contingent on the maturity of the literature on fees in single countries; time is required to develop a literature and to identify areas for logical extensions.

The remainder of this paper is organized as follows. Motivation and literature review section develops the theoretical expectations underlying the relationships between audit fees and the political/economic variables of interest. Formulation of research questions section describes the sample and methodology. Sample and results section discusses the results. The conclusions section concludes the paper.

## MOTIVATION AND LITERATURE REVIEW

Research which attempts to explain the variance in audit fees across international borders is worthwhile for several reasons. As indicated above, few studies have analyzed potential fee determinants which vary across (but not within) countries. Thus, we may not have a complete picture of the economics of audit fees, nor of any individual submarket for those fees. Although a few of the previous studies have considered the extent to which company-specific determinants (such as client size, existence and size of inventories and receivables, etc.) vary in their effect on audit fees between the United States and another or a few other countries (e.g., Haskins and Williams, 1988; Low, et al., 1990; Anderson and Zéghal, 1994), existing studies have not, for the most part, considered and analyzed the extent to which fees are determined by macro-economic and other environmental factors which vary across countries. Further, to the extent that such variables affect the determination of audit fees, the current literature suffers from misspecified models or, at a minimum, from an omitted variables problem.

This research may have public policy implications. For example, it is often alleged that "excessive" litigation or regulation increases the price of many goods and services. These concerns have been raised about a variety of issues from consumer products to professional services such as medicine and accounting. A cross-sectional analysis of how audit pricing may differ across countries in which the regulatory environment differs may contribute to our understanding of public policy questions related to such things as legal systems, regulation, etc. We extend the literature by developing and testing expectations about how economic variables may affect audit fees across individual countries; we then control for these variables in our analysis.

### Previous Research

Beginning with Simunic (1980), a number of studies have examined the market for auditing services in several countries. The initial focus of the majority of these studies has been a few highly developed nations, including the United States (e.g., Palmrose, 1986; Francis and Simon, 1987; Simon and Francis, 1988; Turpen, 1990), the United Kingdom (e.g., Taffler and Ramalinggam, 1982; Chen et al., 1993; Brinn et al., 1994), Australia (Francis, 1984; Francis and Stokes, 1986; Craswell et al., 1995), and Japan (Taylor, 1997). More recently, researchers have also examined the market for audit services in other countries including India (Simon et al., 1986), Hong Kong, Malaysia, and Singapore (Simon et al., 1992), New Zealand (Firth, 1985), Canada (Chung and Lindsay, 1988; Anderson and Zéghal, 1994), Pakistan (Simon and Taylor, 1997), Bangladesh (Karim and Moizer, 1996), and South Korea (Taylor et al., 1999). The majority of these earlier studies have served to establish the responsiveness of audit fees to variables related to auditee size, risk, and complexity. These studies have found that these variables explain a large proportion of the variance in audit fees (see Yardley et al., 1992 for a review).[1] None has, however, considered the extent to which differences in the political/economic environment in which these engagements were conducted affected the pricing of the associated services.

While Haskins and Williams (1988) examined fees from five different countries, the focus of their study was directed at how models from each of the countries varied individually in their ability to explain audit fees.[2] Their results suggested that determinants of fees do not substantially differ across the five countries. This finding is not surprising given that samples of audit fees in the public domain available to those authors were limited to those that were from countries that possess very similar political/economic environments. Finally, during the course of our analysis, we encountered the unpublished study of Wingate (1994), which performed a similar, but less extensive, analysis compared to that presented in this paper. That study analyzed fees from engagements in 10 countries, most of which are grounded in the traditions of the British Commonwealth, for the years 1986–1989. Our sample of 20 countries is larger, and more importantly, more heterogeneous in terms of the variability in the underlying economic, political, and cultural processes in the countries in the sample, and more recent.

## FORMULATION OF RESEARCH QUESTIONS

Previous models of audit fees focus on the client's need to purchase the services of an independent auditor and assume that the auditor's risk is determined by the cost to complete the audit and the auditor's share of the expected loss given client failure (e.g., Simunic, 1980). These models assume that the amount of auditing work to be performed is not independently determined by the auditor; rather the extent of audit work is determined in the fee setting process which is heavily influenced by the client's loss function. The client prefers a combination of auditor effort and residual risk which minimizes expected costs (including losses) associated with operating a financial reporting system. One implication of this assumption is that in a competitive audit market, the auditor cannot recover enough of the costs of auditing to completely eliminate the risk of residual loss

(Hill et al., 1994). Thus, the auditor trades off risk and audit effort. In a competitive audit market, the auditor can rationally respond to increased risk through either expending additional effort or through charging higher fees. Accordingly, empirical tests of these models use client-specific variables to control for differences in loss exposure. We refer to these variables as *micro-economic* variables because they are determined in the micro-economy of the audit firm.

Because previous studies have typically examined audit fees for clients in a given country in isolation, they have ignored institutional, political, and regulatory variables; the variation of which may contribute to differences in the auditor's cost function, and hence, fees. Yet it is reasonable to expect that a number of political and economic variables may be pertinent to cross-sectional variation in audit fees. We refer to such variables as macro-economic variables. Consider the audit fee model presented in Equation 1:

$$\text{Fee} = \alpha_0 + x'\beta + y'\delta + \varepsilon. \tag{1}$$

The model assumes that fees are determined by two sets of variables; the vector $x'\beta$ represents the subset of variables that describe the auditee and/or auditor (micro-economic variables) and the vector $y'\delta$ represents a subset of variables that describe the political/economic environment (macro-economic variables) in which the respective engagement is conducted.

## Micro-economic Variables

As indicated, the micro-economic variables describe the auditee's characteristics in the corresponding audit engagement. These variables control for differences in loss exposure across engagements based on variation in client-specific characteristics. These variables include factors such as size, receivables and inventories, complexity, and industry. Following previous research, we control for such characteristics through the following variables. For auditee size, we use ln*(Assets)*, the natural logarithm of the client's assets. The principal complexity variable, *Invrec*, represents the proportion of auditee's total assets in inventory and receivables. *SqSubs*, the square root of the number of subsidiaries owned by the client, is employed as an audit complexity variable.[3] *Loss*, an indicator variable whose value is one if an auditee experienced a loss in the current or previous year and zero otherwise, is utilized as a measure of risk. *Leverage*, auditee total long-term debt divided by total assets, is also used as an auditee-risk variable. In addition to the size, complexity and risk variables, we also employ variables which previous research has determined are systematically related to audit fees and which control for the industry in which the client operates. *Financial*, *Utility*, and *Mining* are indicator variables whose value is one if the auditee is in the financial institution, utility, or mining industry, respectively, and zero otherwise.[4] Finally, we include an indicator variable, *Big6*, having a value of one if the audit was performed by a Big 6 firm and a value of zero otherwise.

We expect the coefficients on *ln(Assets)*, *Invrec*, *SqSubs*, *Loss*, and *Leverage* to be positive. For example, ceteris paribus, larger auditees (as measured by total assets) will require more audit effort and result in higher fees. Auditees that are highly leveraged or have experienced losses are more likely to fail, exposing the auditor to potential litigation

costs, and hence, are expected to be associated with higher fees. In addition to these size and risk factors, certain assets require more audit effort, and hence, lead to higher audit fees; in particular, receivables and inventory typically require more audit effort than other assets. Auditees that have relatively more subsidiaries are also expected to have higher fees. Based on research which has determined that fees are consistently lower for auditees that are financial institutions, utilities, or mining operations (e.g., Simunic, 1980; Turpen, 1990; Simon, 1995), we expect the coefficients on *Financial*, *Utility*, and *Mining* to be negative. Finally, as previous research has shown that the large international audit firms are able to command a fee premium from clients engaging their services (see, e.g., Simunic, 1980; Simon and Taylor, 1997; Taylor, 1997), we expect the sign of the *Big6* coefficient to be positive.

## Macro-economic Variables

Although the micro-economic variables noted above are important to the determination of audit fees as evidenced by a voluminous literature, the primary focus of this study is on those variables that capture the effects of political and economic factors that vary across the environments in which audits are conducted. A number of these variables may affect the fee setting process.

### *Litigation Propensity*

In the United States audit market, litigation against auditors is currently of significant concern. Audit firms in the United States are currently expending a significant portion of their revenues for litigation purposes. However, the propensity to resolve property rights disputes via litigation differs across countries. Loss exposure can be expected to increase within the borders of a given country the greater the propensity to resort to litigation in that country. Other things equal, more intense litigation pressures are expected to lead to higher audit fees. To operationalize litigation pressures, we contacted a leading insurance brokerage firm, which maintains a litigation index for purposes of pricing insurance premiums for large international accounting firms in countries across the world. The index is based on several environmental and political factors, which affect the likelihood of litigation against the audit firms. The index has a range of 0–10, is calculated individually for a portfolio of about 110 countries, and is updated annually. We refer to the variable as *Lit* in the text and tables below.[5] We expect the coefficient on *Lit* to be positive.

### *Disclosure*

Loss exposure can be expected to increase the greater the complexity of the financial reporting system. One indication of that complexity is the average relative extent of disclosure that accompanies firms' financial statements in a given political/economic system. Previous research has shown that intensity and extent of financial statements disclosure differs across differing accounting regimes (e.g., CIFAR, 1995). In addition to spending a great deal of time auditing financial statement components, auditors also spend a great deal of time auditing and examining those disclosures. We expect, then, that in

financial reporting environments in which disclosure is relatively more extensive, audit fees will be higher. The Center for International Financial Analysis and Research (CIFAR) has developed an index of international financial disclosure by examining annual reports for approximately 1000 companies from 44 countries with respect to the companies' reporting or nonreporting of 90 items subdivided into seven categories. The purpose of the CIFAR study was to assess the informativeness of annual reports across countries. The index, which we refer to as *Disc*, is a continuous variable with a potential range from 1–90. Therefore, we expect the sign on the variable *Disc* to be positive.

### Regulation

Another potentially important environmental factor which may affect audit fees is the overall extent of regulation of the process of financial reporting and audit services. Typically, regulation imposed by authoritative bodies increases the cost of the activity being regulated and the intensity of that regulation varies depending on the political and economic environment in which the activity is being conducted. For auditing services, regulation, specifically as it relates to the accounting and auditing environment, is expected to increase the cost of delivering auditing services. We employ *Reg*, a measure of the intensity of such regulation as developed and reported in Cooke and Wallace (1990). *Reg* is a variable ranging from $-1$ to 4. It is a relative statistic that reflects the extent to which numerous aspects of financial reporting are regulated in each respective nation.[6]

Based on the foregoing, we specify the audit fee function as follows:

$$\begin{aligned}\ln(\text{Fee}) = \alpha &+ \beta_1 \mathit{ln(Assets)} + \beta_2 \mathit{Invrec} + \beta_3 \mathit{Loss} + \beta_4 \mathit{Leverage} + \beta_5 \mathit{Financial} \\ &+ \beta_6 \mathit{Utility} + \beta_7 \mathit{Mining} + \beta_8 \mathit{SqSubs} + \beta_9 \mathit{Big6} \\ &+ \delta_1 \mathit{Lit} + \delta_2 \mathit{Disc} + \delta_3 \mathit{Reg} + \varepsilon.\end{aligned} \tag{2}$$

Sample and results section discusses the sample and the results of implementing Equation 2 using ordinary least squares regression.

## SAMPLE AND RESULTS

We focus on the market for audits of public traded firms not only because of our access to a relatively large sample of fees from several countries, but also because of the extensive background literature dealing with variance in audit fees in individual countries which collectively suggests, but individually ignores the variety of environmental factors that potentially influence the market for audit services.

The sample consists of over 2300 fee observations from audit engagements in 20 different countries during the period 1991–1995. Table 1 summarizes both the source of the observations and the country of origin. Data availability constraints drove much of the selection of the countries. As shown in Table 1, roughly half of the observations on fees in the sample came from SPGV database. This data source was first augmented by observations obtained from annual reports for countries where audit fees are required disclosure, but were not included in the SPGV database. Next, we expanded the sample with fee observations from countries with different cultural and political traditions to

**Table 1.** Country of Origin, Source, and Frequency of Audit Fee Observations

| | *Source of audit fee observations* | | | | |
|---|---|---|---|---|---|
| *Country* | *SPGV*[a] | *Copies of annual reports* | *Questionnaire*[b] | *Proxy statement*[c] | *Totals* |
| Australia | 205 | | | | 205 |
| Canada | | | 64 | | 64 |
| Chile | | | 30 | | 30 |
| Great Britain | 274 | | | | 274 |
| Hong Kong | 129 | | | | 129 |
| India | | 139 | | | 139 |
| Ireland | 51 | 26 | | | 77 |
| Japan | | | 152 | | 152 |
| Korea | | | 82 | | 82 |
| Malaysia | 133 | | | | 133 |
| Mexico | | | 15 | | 15 |
| New Zealand | 31 | 30 | | | 61 |
| Nigeria | | 75 | | | 75 |
| Pakistan | | 150 | | | 150 |
| Singapore | 125 | | | | 125 |
| South Africa | 230 | 44 | | | 274 |
| Spain | | | 24 | | 24 |
| Sri Lanka | | 116 | | | 116 |
| United States | | | | 186 | 186 |
| Zimbabwe | | 22 | | | 22 |
| Totals | 1178 | 602 | 367 | 186 | 2333 |

*Notes:* [a]Standard and Poor's Global Vantage database.
[b]Responses to questionnaires sent by the authors to a sample of firms in these countries who were listed in Moody's International Manual.
[c]Voluntary disclosures of audit fees by US firms in proxy statements filed with the US Securities Exchange Commission.

increase the heterogeneity of the sample. For the seven countries in our study in which audit fees are not required disclosure, we obtained fee observations from proxy statements (United States) or questionnaires (Canada, Chile, Japan, Korea, Mexico, and Spain).

One of the problems associated with combining observations on financial variables from individual countries into one data set is converting the observations into a common currency. In all cases, we have converted monetary figures to US dollars. SPGV software provides a utility that automatically converts financial statement information to a currency of choice. For those samples which were collected from sources other than the SPGV database, we used the SPGV methodology for converting domestic currency to US dollars. For income statement figures, we used a 12-month moving average exchange rate; for balance sheet items, we used the exchange rates as of the date of the respective item being converted, both of which were obtained from the SPGV database. Note that for the four macro-economic variables for each individual country, the observations for these variables are the same for all years and instances within each country. Thus, they vary across, but not within, individual countries in the sample.[7]

Panel a of Table 2 contains descriptive statistics for the micro-economic variables in Equation 2. The mean audit fee is US$770,000. Significant variation is evident for most of the variables in Panel a of Table 2. Panel b of Table 2 presents descriptive statistics on the macro-economic variables in Equation 2. There is considerable variation in those variables

**Table 2.** Descriptive Statistics

*Panel a. Descriptive Statistics for the Dependent and Micro-economic Explanatory Variables*

| *Statistic* | *Fee*[a] | *Assets*[a] | *Invrec* | *Leverage* | *Loss* | *Financial* | *Utility* | *Mining* | *Subs* | *Big6* |
|---|---|---|---|---|---|---|---|---|---|---|
| Mean | 0.77 | 3696.5 | 0.30 | 0.14 | 0.18 | 0.15 | 0.03 | 0.03 | 18.73 | 0.74 |
| Standard deviation | 2.06 | 16,788.1 | 0.22 | 0.33 | 0.39 | 0.36 | 0.17 | 0.16 | 36.75 | 0.44 |
| Median | 0.14 | 257.2 | 0.28 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 8 | 1.00 |
| High | 41.18 | 251,506.0 | 0.95 | 13.74 | 1.00 | 1.00 | 1.00 | 1.00 | 485 | 1.00 |
| Low | 0.0002 | 0.4 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0.00 |

*Panel b. Descriptive Statistics for the Macro-economic Explanatory Variables*

| *Statistic* | *Lit* | *Disc* | *Reg* |
|---|---|---|---|
| Mean | 5.54 | 70.52 | 2.85 |
| Standard deviation | 2.76 | 6.79 | 0.43 |
| Median | 4.24 | 72.00 | 2.98 |
| Maximum | 10.00 | 79.00 | 3.45 |
| Minimum | 1.27 | 52.00 | 0.70 |

*Note:* [a]In millions of US dollars.

**Table 3.** Correlation Matrix

| | *ln (Assets)* | *Invrec* | *Leverage* | *Loss* | *Financial* | *Utility* | *Mining* | *SqSubs* | *Big6* | *Lit* | *Disc* | *Reg* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ln(Assets) | 1.0000 | | | | | | | | | | | |
| Invrec | 0.1976 | 1.0000 | | | | | | | | | | |
| Leverage | 0.0275 | 0.1051 | 1.0000 | | | | | | | | | |
| Loss | 0.1398 | 0.0296 | −0.1030 | 1.0000 | | | | | | | | |
| Financial | −0.1187 | 0.3902 | 0.0898 | 0.0541 | 1.0000 | | | | | | | |
| Utility | −0.1078 | 0.1753 | −0.0209 | 0.0642 | 0.1256 | 1.0000 | | | | | | |
| Mining | 0.0527 | 0.2191 | 0.0373 | −0.0410 | 0.0959 | 0.0603 | 1.0000 | | | | | |
| SqSubs | −0.4914 | −0.0616 | −0.0453 | −0.0484 | 0.1493 | 0.1319 | 0.0591 | 1.0000 | | | | |
| Big6 | −0.2271 | −0.0447 | −0.0030 | −0.1018 | 0.0373 | −0.0182 | 0.0167 | 0.0592 | 1.0000 | | | |
| Lit | −0.1243 | 0.0930 | −0.1120 | −0.1621 | 0.0147 | −0.0561 | 0.1189 | −0.0154 | −0.0396 | 1.0000 | | |
| Disc | 0.0841 | −0.0453 | 0.1311 | 0.0954 | −0.1059 | 0.0193 | −0.1202 | −0.2155 | −0.1159 | −0.6869 | 1.0000 | |
| Reg | −0.0781 | −0.0402 | 0.0643 | −0.0965 | −0.0959 | 0.0540 | −0.0752 | 0.0842 | 0.0394 | −0.2529 | −0.0192 | 1.0000 |

**Table 4.** Analysis of Variance and Regression Results

*Panel a. Analysis of Variance*

| *Source* | *df* | *Sum of squares* | *Mean square* | *F* | *p-value* |
|---|---|---|---|---|---|
| Model | 12 | 8993.18 | 749.43 | 649.13 | 0.0001 |
| Error | 2315 | 2676.19 | 1.15 | | |
| Total | 2327 | 11,669.37 | | | |
| Adjusted $R$-square: 0.7695 | | | | | |

*Panel b. Expected Signs, Parameter Estimates, and Significance Values for the Regression of ln(Fee) on Explanatory Micro- and Macro-economic Variables for the 20-Country Sample*

| *Variable* | *Expected sign* | *Parameter estimate* | *Standard error* | *t* | *p-value (one-tailed)* |
|---|---|---|---|---|---|
| Intercept | NA | −14.01 | 0.36 | −39.39 | 0.0001 |
| ln(Assets) | + | 0.63 | 0.13 | 47.66 | 0.0001 |
| Invrec | + | 2.05 | 0.12 | 16.98 | 0.0001 |
| Leverage | + | 0.09 | 0.07 | 1.29 | 0.0989 |
| Loss | + | 0.17 | 0.06 | 2.87 | 0.0041 |
| Financial | − | −0.64 | 0.07 | −9.11 | 0.0001 |
| Utility | − | −0.56 | 0.14 | −4.16 | 0.0001 |
| Mining | − | −0.09 | 0.14 | −0.70 | 0.2427 |
| SqSubs | + | 0.07 | 0.01 | 7.62 | 0.0001 |
| Big6 | + | 0.38 | 0.05 | 6.97 | 0.0001 |
| Lit | + | 0.10 | 0.01 | 7.53 | 0.0001 |
| Disc | + | 0.07 | 0.01 | 13.45 | 0.0001 |
| Regulation | + | 0.55 | 0.05 | 9.56 | 0.0001 |

as well, indicating that the sample provides a broad cross-section of observations on the variables of primary interest in the study. Table 3 presents a correlation matrix for the explanatory variables used in the analysis.

## RESULTS

We use ordinary least squares regression to obtain parameter estimates and standard errors for Equation 2. Table 4 presents the results. Panel a of Table 4 indicates that the overall model is highly significant ($F$ = 649.13; $p$ < 0.0001); the model explains more than three-fourths of the variation in audit fees as indicated by the adjusted $R$-square of 0.7695. Note in Panel b of Table 4 that all of the coefficients of the micro-economic variables have the expected sign. Further, Panel b also shows that the coefficients for the microeconomic variables are all highly significant except for the variable for financial statement leverage (*Leverage*) and the indicator variable for mining companies (*Mining*), the former being moderately significant, the latter being not significant. The one-sided $p$-values of the *Leverage* and *Mining* variables are 0.0989 and 0.2427, respectively. Note specifically that the sign on the variable that captures the type of audit firm performing the audit (*Big6*) is also in the expected direction and highly significant ($t$ = 6.97; $p$ < 0.0001). This result suggests that the large firms are able to command a fee premium on a global basis. Overall, these results suggest that variables which describe the auditee

and that have generally been included in typical models of fees from previous studies contribute to explaining variance in audit fees across countries in general.

Next, consider the coefficients on the three macro-economic variables. As expected, the coefficient on the variable capturing the risk of litigation against audit firms, *Lit*, is positive and highly significant ($t = 7.53$; $p < 0.0001$). This result is consistent with the notion that more intense litigation pressures in general increase the price of audit services.

The coefficient on the variable that captures the overall extent of financial statement disclosure in a given country, *Disc*, is also positive and highly significant ($t = 13.45$; $p < 0.0001$). This result is consistent with the idea that in environments in which generally accepted accounting principles require relatively more extensive disclosure, audit fees increase as auditors apparently spend more time and effort in auditing those disclosures.

The sign on the coefficient which captures the extent of exogenously imposed regulation (*Reg*) is positive and also highly significant ($t = 9.56$; $p < 0.0001$). This result is consistent with the notion that in those environments where financial reporting regulation is relatively more intense, the cost of the audit is increased such that the fees charged for the audit are also significantly increased.[8]

Several rules of thumb that are often suggested for judging the potential severity of multicollinearity problems indicate that such problems are not severe for our sample. For example, it is not the case that the overall $F$-value for our regression results in Table 4 is significant at 0.0001, but that none of the $t$-values for the explanatory variables is significant at that level (Kmenta, 1986). Klein (1962) suggests that multicollinearity is not necessarily a problem unless the intercorrelation of explanatory variables is "high" relative to the overall multiple correlation coefficient. In our model, the multiple correlation coefficient is 0.88. The results of simple correlations between pairs of explanatory variables (Table 3) indicate that the highest correlation was 0.6869, and only one other exceeded 0.40.

As a final test, we examine the variance inflation factors (VIF) of this regression. A variance inflation factor in excess of 10 indicates that multicollinearity may be unduly influencing least squares estimates (Neter et al., 1990). None of the VIFs approach this level. Further, none of the VIFs even approach the conservative threshold of 5 suggested by Montgomery and Peck (1982), the highest being 2.80. Thus, it does not appear that our results are influenced by multicollinearity in our sample.

## CONCLUSIONS

This paper developed and estimated a model of audit fee determinants that include both micro-economic and macro-economic variables using data from the public audit markets in 20 countries for the years 1991–1995. The primary conclusion is that environmental characteristics (such as litigation, disclosure requirements, and regulation) are important determinants of variation in the fees that are charged in the global market for audit services. Specifically, relatively intense litigation propensities, higher levels of disclosure, and more extensive regulation are associated with higher audit fees.

This study has a number of potential limitations. For instance, some of the standard variables which control for auditee characteristics in previous studies, such as the audit

opinion rendered (a control for auditee risk), are not included here. Further, we realize that our operationalization for the macro-economic variables may not be optimal. Indeed, variation in those variables within countries is a desirable, but not available option in all cases. We leave these and other questions to future research. Perhaps other surrogates may become available which may overcome these limitations. Finally, as our sample of countries is not comprehensive, it is possible, despite the significance levels found in the results, that the sample may be driving the result. This is an empirical question that is left to future research that can expand the sample to a larger number of countries.

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## NOTES

1. An extensive review of previous research on individual audit markets is superfluous for purposes of this study, since relatively recent and thorough reviews exist already (e.g., Yardley et al., 1992). Insofar as we reference this literature for purposes of illustration and direct references, selected references are included.
2. The countries included in the study were Australia, Ireland, New Zealand, the United Kingdom, and the United States.
3. The model uses the square-root transformation of the number of subsidiaries, which provides a slightly better fit than the untransformed variable.
4. Auditees with SIC codes in the ranges 1000–1299, 4900–4999, 6000–6999 are assigned a value of one to the Mining, Utility, and Financial indicator variables, respectively.
5. The premium distribution formula does not include an observation for the United States. However, based on discussions with the project administrator, a value of 10 has been assigned to the United States. Sensitivity analysis indicates that the results are robust with respect to alternative values (all at the upper end of the range) assigned to the United States.
6. Essentially, Cooke and Wallace (1990) rated 80 financial reporting variables across the countries included in their study as to whether each variables was required (scored as a 4), insisted upon (scored as a 3), predominantly used (scored as a 2), infrequently used in practice (scored as a 1), rarely used (0), or not accepted (−1). They then divide the sum of the ratings by 80 to determine each country's index. See Cooke and Wallace (1990) for complete description.
7. We make no attempt to control for country-specific differences in generally accepted accounting principles on the various financial-statement variables used in the analysis.
8. As multiple years are included in the sample, we ran the regression with indicator variables for year of observation to determine the effect of multiple years on the results. Further, we also ran the regressions by year. In general, the results of these two procedures are qualitatively identical to those shown in Table 4. In the former case, one of the year indicator variables (for 1993) was significant to the overall regression, indicating a slight decline in audit prices during that year. Note also that no attempt was made to control for country-specific differences in generally accepted accounting principles.

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# Corporate Social Disclosures by Listed Companies on Their Web Sites: An International Comparison

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**Key Words:** Corporate social disclosures; World Wide Web; Asia-Pacific; Quantity; Quality

***Abstract:*** *This paper extends previous research of corporate social disclosures by concentrating on information released on a firm's Web Site rather than through annual reports. It compares and contrasts corporate social disclosure practices between the two mediums of communication with respect to the number of firms reporting, amount of information released, and nation. In addition, this study considers the practices of 172 organizations from four nations within the Asia-Pacific region (namely Australia, Singapore, Malaysia and Hong Kong). The principal findings of this study are: (1) Australian and Singaporean firms provide significantly more corporate social disclosures on their Web Sites than in annual reports with their counterparts in Malaysia and Hong Kong showing no significant differences; (2) organizations in all countries appear to provide more narrative information on Web Sites than annual reports; and (3) companies provide a greater emphasis on disclosing product and customer-related information on their Web Sites than in annual reports.*

Despite various companies having established Web Sites through which they are disseminating accounting information, empirical investigations examining the influence of this medium on disclosure practices are still very much in its infancy. International comparison studies of accounting disclosure practices via this medium are almost nonexistent. This paper aims to provide some insights into this gap in the literature. The major objective of this paper is to identify, if any, variations in corporate social disclosure practices on Web Sites across national boundaries relative to that in annual reports. In particular, practices of listed companies with World Wide Web sites in Australia, Singapore, Hong Kong and Malaysia, were compared and contrasted with respect to the amount, nature and type of disclosure on their World Wide Web sites relative to annual reports. Specific examination of corporate social disclosures is undertaken in this study as it is one form of disclosure considered by some proponents to be best suited for release via alternative mass communication mechanisms rather than through annual reports

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(Zeghal and Ahmed, 1990). Our findings indicate that Australia- and Singapore-based companies provided more corporate social disclosures on Web Sites than in annual reports; results not present in Hong Kong and Malaysia. Our results also appear to indicate that the country of origin remains a strong determinant of corporate social disclosure regardless of the medium used.

Accounting does not stand isolated from the growing spidery tentacles of the World Wide Web and use of electronic commerce. The Securities and Exchange Commission (SEC) in the United States, for example, now requires companies online to submit all information (such as quarterly and annual reports) electronically, information that is then posted directly on a Web server (Securities and Exchange Commission, 1997). Accounting standards setters in other nations of the world, such as Australia, the United Kingdom and those in Europe have indicated an interest in following the SEC directives emphasizing use of the electronic medium rather than print (Schneider and Bowen, 1997; Baldwin and Williams, 1998). As an alternative mechanism for disseminating accounting information, the World Wide Web offers various advantages over the traditional print format of annual reports (refer to the Literature review section and Table 1 for a full discussion). An important advantage of the World Wide Web over traditional print media with international implications is its potential to promote harmonization in disclosure practices. The World Wide Web has the ability to deliver information to a wider spectrum of stakeholders across a broader locality (global rather than just national) within the same time frame with greater regularity and lower cost (Keeler, 1995; Liu and Hodonos, 1996). An entity in Australia, for example, could place relevant accounting information on their World Wide Web at any moment thus enabling a stakeholder in the United States to access the details the instant it is uploaded. If the same information was disseminated by print media, then there is inevitably a delay due to factors such as mailing. Companies using print media may perceive that the cost of disseminating accounting information on a global scale through this vehicle outweighs the benefits. In contrast, the lower costs of dissemination via the World Wide Web compared to print may alter management's perceptions on this issue (see, for example, Zeff and Aronson, 1997; Chan, 1998). If the World Wide Web acts as a more efficient mechanism for disseminating accounting information across a wider global audience, and management perceives this to be so, then this may provide the necessary incentive for firms to make more uniform disclosures to meet global, rather than national, stakeholder needs.

This study focuses primarily on the Asia-Pacific region for four basic reasons. First, this region forms an important part of the current and future global economy (Hossain et al., 1994; Kusumo, 1998). Second, various analysts predict that the present rapid growth in Internet usage, adoption information technology and electronic commerce within this region will continue well past the turn of the century (Chan, 1998; Lai, 1998). Computer integration into this region, therefore, will become an ever-increasing part of social and business lifestyles in the Asia-Pacific region (Chui, 1998). Third, this region offers a diversity in socio-economic, political and cultural factors that will enable this study to identify any variation in corporate social disclosure practices in annual reports and on Web Sites across national boundaries (Craig and Diga, 1996). Finally, despite its contribution to the global economy, research in accounting issues within this region is still limited (Williams, 1998).

**Table 1.** Comparison Between Annual Reports and Web Sites[a]

| *Characteristic* | *Annual report* | *Web Sites* |
|---|---|---|
| Nature of stakeholder | Active | Active |
| Two-way communication | No | Yes |
| Speed of communication | Moderate | Instantaneous |
| Level of stakeholder interactivity with medium | Moderate | Very high |
| Stakeholder control over content received | To some extent | Yes |
| Stakeholder control over amount of information received | Yes | Yes |
| Ability of medium to establish one-to-one relationship with stakeholder | No | Yes |
| Stakeholder ability to make the decision to approach company | Yes | Yes |
| Stakeholders' ability to personalize message received | Yes to some extent; stakeholder can decide on the order with which to read annual report | Yes |
| Time frame stakeholder can access message | Dependent upon when stakeholder wants to read annual report | None; the Web Site is available 24 h a day[18] |
| Space availability of medium | Limited by page size | Unlimited[19] |
| Graphic content | Yes | Yes |
| Audio content | No | Yes |
| Flexibility to move site to a more suitable location | No | Yes |

*Sources:* [a]Gallant (1997), Griffin (1993), Hoffman and Novak (1996), Janal (1995), Keeler (1995), Liu and Hodonos (1996), Pogorelic (1996), Zeff and Aronson (1997), and Zhivago (1995).

Consideration of only four nations, Australia, Singapore, Hong Kong and Malaysia, from the Asia-Pacific region was due to either limiting factors or close similarities between nations. New Zealand, for example, was excluded from the study due to the close socio-economic, political and cultural similarity and accounting practices to Australia. It was considered that in the face of such similarities, results related to Australia could be extrapolated to New Zealand companies. One limitation of this study is that it focused only on English language annual reports and Web Sites due to the linguistic abilities of the researchers.[1] Several countries, such as Japan and Korea, were excluded from the study, therefore, due to difficulties in accessing sufficient information in English. The study further focused only on those publicly listed companies in Australia, Singapore, Hong Kong and Malaysia due to difficulties in some nations (for example, the Philippines and Thailand) to collect relevant annual reports of those companies with Web Sites to enable corresponding matching.[2]

Despite limiting this study to the four aforementioned nations, differences in the socio-economic, political and cultural structure of these nations, are still deemed sufficiently diverse to capture any variations, if any, in practices across national boundaries both in terms of disclosures in annual reports[3] and on Web Sites. Any

results from this study attributable to the nation of origin of a firm are considered to still be applicable to other nations within the region.

The contribution of this paper has many different facets, four of which are described as follows. First, this study will assist in providing some initial guidance into research of disclosure practices on World Wide Web Sites, thus expanding on previous literature that has focused on annual reports. Second, this study expands on previous corporate social disclosure literature by providing further evidence related to international accounting practices related to this phenomenon, whilst also considering a different medium of transmission. Third, this study examines corporate social disclosure practices in several nations (namely Singapore, Hong Kong and Malaysia) forming an important part of the global economy, but not readily examined in the prior literature. Finally, results from this study will help to identify in part current international reactions to the advent of technology and how it is being utilized.

The remainder of this paper is organized as follows. Literature review section provides a brief outline of the prior literature related to corporate social reporting and alternative forms of mass communication. Two research propositions are then developed. The research method applied in this study is outlined in the Research method section. Findings from this study are detailed in the Results section, followed by an analysis of the major implications from the results. Finally, conclusions, limitations and future research ideas are discussed in the Conclusions and future research section.

## LITERATURE REVIEW

The 1990s have witnessed an increasing emphasis on information technology, with today's society becoming increasingly sophisticated (Ndumu and Nwana, 1997). This period has generated a variety of innovations including the establishment of the World Wide Web in various corners of the world as an actively utilized medium for disclosing information. The following subsection contrasts the possible difference in disseminating information via the World Wide Web and annual reports. This analysis is then followed by the development of two propositions to be examined by this study.

### Contrast between World Wide Web and Annual Reports

Numerous commentators have stated that the strength of the World Wide Web interacting in everyday life is inevitable. Dix et al. (1998) state, for example, that the advent of the World Wide Web is like a 40-m high tidal wave that inevitably cannot be stopped. The World Wide Web can offer stakeholders a number of advantages presently unavailable in print media (see Table 1). For instance, the World Wide Web provides anyone connected to the network (that is, for instance, any individual, interest group, organization and government) with a powerful tool for both accessing and providing information, vastly superior to many degrees than alternative means such as the print media. An individual in Australia researching a company in the United States can, if that firm is connected to the World Wide Web, obtain information that is timely and relevant directly from the entity in virtual real time. Web Sites can be updated at any time, thus allowing a stakeholder instantaneous access to information from any location, at any

time of the day. In contrast, if the person is reliant upon printed material, then this will involve a delay due to mailing and handling from the United States to Australia. Also, the information in the printed material is likely to be somewhat out of date once received. Table 1 summarizes the chief similarities and contrasts between annual reports and Web Sites.

Cost of disseminating information via the World Wide Web is another important characteristic that firms may find advantageous over the print media (Gallant, 1997). If a firm wishes to print, publish and disseminate a large document to a large stakeholder base (for example, a 30-page report to 50,000 people), then the cost is likely to take a sizeable portion of one's budget. In contrast, a firm can mount the same document onto a Web Site and then distribute an e-mail to stakeholders telling them where to access and download the information. Firms no longer have to bear any realized costs of printing and postage, or the unrealized cost of the details not being timely as a result of slow printing and delivery (Zeff and Aronson, 1997).

Space allocation is another characteristic that provides Web Sites with an advantage over annual reports. To a large degree, the size of the paper and length of report restrict the latter medium (Hoffman and Novak, 1996). It is acknowledged that firms could if so desired prepare annual reports using any size paper and length possible. Pragmatically, however, due to costs of materials, printing and postage, combined with a potential fear that stakeholders receiving egregious size reports may react negatively, management must conceivably apply some degree of limitations (Zhivago, 1995). Due to technological advances and development of new computer languages, disk storage space required for digital data[4] and the hardware needed has decreased dramatically during the 1990s. Furthermore, additional computer storage devices can be added at relatively low costs, thus increasing the ability of a company to expand the amount of information it wishes to present on a Web Site (Dix et al., 1998).

Finally, companies have the advantage when using Web Sites of being able to establish a one-to-one relationship with a stakeholder, a feature not available for annual reports (Griffin, 1993). With the latter form of communication, the stakeholder is presented with an annual report and the information contained within it and must receive and interpret the message being delivered without the opportunity to discuss with the provider. By contrast, the majority of Web Sites have e-mail facilities and other communication devices that enable the stakeholder to request, query and impart with the provider immediately upon receiving information (Janal, 1995). This ability to communicate with companies immediately enables a closer and more personal relationship between the stakeholder and entity in question.

In summary, the World Wide Web differs significantly in its ability to disseminate accounting information to stakeholders than the traditional print medium of annual reports. The major implication for international accounting concerns harmonization. Companies have the ability to disclose more information to a wider global set of stakeholders in virtual real time with a reduced cost at more regular intervals than annual reports. As argued by Chui (1998, p. 2), small businesses can, via the World Wide Web, act as well as big businesses capable of "crossing borders and getting a lot of foreign customers." Companies, even those that are relatively small, have the opportunity to attract stakeholders further afield through the World Wide Web than print media does. To meet the needs of stakeholders across national boundaries, companies may have to disclose

different information sets, or make additional disclosures above that directed toward stakeholders in the nation of operation. As companies can now address international needs, there is the potential incentive for greater harmonization of accounting disclosure practices via this mechanism than annual reports. Research, however, is necessary to identify how companies are utilizing this new medium relative to traditional means. The following two subsections develop further the possible impact of the World Wide Web with specific reference to corporate social disclosures leading to the development of two general propositions that form the focus of this study.

### Corporate Social Disclosures on Web Sites vs. Annual Reports

From the analysis in the previous subsection, it is argued that annual reports and the World Wide Web, as medium for disseminating information, do differ. It was further implied that organizations might utilize the different medium accordingly. Corporate social disclosures, it has been argued by some prominent researchers (Preston, 1981; Parker, 1982; Gray et al., 1995a; Mathews, 1997), are one form of disclosure that organizations may present differently depending on the medium being used. Consideration of this type of disclosure is, therefore, highly relevant in the context of this study. That is, if companies consider Web Sites to be a different mechanism for disseminating accounting information relative to annual reports, then it is likely that such differences will be noted in relation to corporate social disclosures.

It has been argued that corporate social disclosures is a mechanism used by organizations to protect their own self-interests and deflect the attention and intervention of regulatory bodies (Guthrie and Parker, 1990). That is, companies make corporate social disclosures to advocate and enhance the entity's position and image, promote customer and community relations with the incentive of indirectly assisting to promote products and customers. This view of corporate social disclosures fulfills the role defined by Zeghal and Ahmed (1990). This, therefore, implies that companies are more likely to use additional mass media vehicles, such as the World Wide Web, in conjunction with annual reports to make corporate social disclosures relative to other types of disclosure. Despite various studies acknowledging that to fully understand corporate social disclosures, researchers must investigate these alternative mass mediums (see, for example, Guthrie and Mathews, 1985; Roberts, 1991; Kirkman and Hope, 1992); few studies have attempted to provide any evidence (Zeghal and Ahmed, 1990; Deegan and Rankin, 1997). Empirical research, though limited, has supported this presumption nonetheless. Based on these findings, it is argued in this paper that companies in Australia, Singapore, Hong Kong and Malaysia will follow different corporate social disclosure practices when making disclosures via Web Sites relative to annual reports. The following proposition is therefore derived.

**Proposition 1** Corporate social disclosures, with respect to the number of companies, amount, nature and type of disclosure on Web Sites relative to annual reports will be significantly different amongst listed companies in Australia, Singapore, Hong Kong and Malaysia.

## Corporate Social Disclosure in an International Perspective

At present, theoretical explanations for accounting disclosure practices on Web Sites are nonexistent. Past international empirical research on corporate social disclosure practices have reported variations across national boundaries (Gray et al., 1996). Bourgeois political economy[5] has been utilized to explain the influence of country of origin on corporate social disclosure practices.

A derivative of the modern liberalism[6] perspective, bourgeois political economy concentrates on the interactions of actors within a pluralistic world[7] (Clark, 1991, p. 90). Organizations endeavour to construct, sustain and legitimize "social, economic and political arrangements, institutions and ideological themes" with those bodies "which contribute to the corporation's private interests" (Guthrie and Parker, 1990, p. 166). Rights of the individual (whether that be a single person or an organization) to pursue their own goals and self-interests are emphasized (Clark, 1991), though moderated by the social environment in which they exist (Gray et al., 1996). Actions of the government are also important under this theoretical strand. Proponents argue that governments play an important part in protecting the interests of individuals seeking to achieve their objectives (see, for example, Okun, 1970; Shapiro, 1986). Clark (1991) argues that government intervention is particularly advantageous in the face of market failures such as imperfect competition, externalities, instability, inequality and socially undesirable outcomes. If the activities of the organization do and/or are perceived to impede on the wider community, governments may intervene to protect individual rights of the community (Gray et al., 1995a). However, potential intervention may jeopardize the self-interests and goals of the enterprise (Guthrie and Parker, 1990).

An example of how corporate social disclosures may be used to protect one's self interests may be drawn in reference to an organization that has failed in the past to satisfactorily meet pollution control requirements.[8] Management of the firm may fear that society will become disenchanted with the company and withdraw support. Likewise, the government could potentially introduce more stringent guidelines and requirements that further jeopardize the survival of the enterprise. In response to these threats, the organization could disclose information telling the relevant public and government of action undertaken by the firm, or alterations in policy or procedures introduced that will enable the company to meet present requirements in the future. The basic strategy of releasing such information would be to restore society's confidence in the entity, build a positive image and deflect government concerns and attention.

The most important point to note in relation to Bourgeois political economy relates to its international implications; that is, this theoretical perspective suggests the social, political and economic environment within which an organization operates will largely influence corporate social disclosures. Williams (1998) found empirical support for this view in the Asia-Pacific region, reporting that cultural factors and the political, civil and legal systems were all significant determinants of corporate social disclosures. The study by Williams (1998), however, examined only annual reports. If, as suggested above, the World Wide Web offers companies an alternative mechanism to annual reports such that companies have to address the needs of stakeholders on a broader global scale, then national socio-political and economic influences of the environment in which the firm operates may be diminished. That is, firms knowing their Web Sites can be accessed by

stakeholders anywhere around the world may have an incentive to supply information on an international level. However, as there is currently no theoretical or empirical accounting literature providing guidance on the effects of country of origin on disclosures via the World Wide Web, this paper utilizes the tenets of bourgeois political economy in forming the second proposition. This proposition is given as follows.

**Proposition 2** Corporate social disclosure practices using either annual reports or Web Sites will differ significantly across national boundaries between firms operating in Australia, Singapore, Hong Kong and Malaysia.

## RESEARCH METHOD

### Sample Selection

The initial sample population for this study comprised all listed companies on the stock exchanges of Australia, Singapore, Hong Kong and Malaysia at 31st December 1995. Internet search engines (for example, Yahoo, Webcrawler, Excite) and directories were then scanned to detect companies operating their own Web Sites.[9] A total of 196 companies were found to administer their own Web Sites.[10] The national breakdown of companies was as follows: Australia — 58 (29.59% of total sample); Singapore — 48 (24.50%); Hong Kong — 51 (26.02%); and Malaysia — 39 (19.90%). A letter was sent to the corporations within the sample population requesting a copy of their annual report for 1996. Companies failing to respond after 8 weeks were sent a follow-up letter.

To measure the type, amount and nature of corporate social disclosures on a corporation's Web Site, all relevant files were downloaded on the day of the release of that company's annual report.[11] This procedure was adopted to increase reliability and to control for potential fluctuations due to timing differences when comparing results based on Web Site information relative to that in corresponding annual reports. Transcripts from files downloaded from Web Sites were subsequently printed to allow for the relevant analysis.[12] Release dates of annual reports were obtained either directly from the company or the stock exchange on which the enterprise was listed.

### Measurement of the Quantity and Nature of Corporate Social Disclosure

The quantity of corporate social disclosures[13] was measured using content analysis. This technique has been readily applied in corporate social disclosure-based research (see Gray et al., 1995b for a review). Content analysis is defined by Abbott and Monsen (1979, p. 504) as "a technique for gathering data that consists of codifying qualitative information in anecdotal and literary form, into categories in order to derive quantitative scales of varying levels of complexity."

A checklist instrument categorized corporate social disclosures into five major themes: (1) environment; (2) energy; (3) human resources and management; (4) products and customers; and (5) community. Definitions applied in the checklist instrument were

**Table 2.** Response Rates

*Panel A — Response Rates by Nation*

| *Nation* | *Number of firms with Web Sites* | *Number of firms responding with annual report* | *Response rate percentage* |
|---|---|---|---|
| Australia | 58 | 55 | 94.83% |
| Singapore | 48 | 44 | 91.67% |
| Malaysia | 39 | 31 | 79.49% |
| Hong Kong | 51 | 42 | 82.35% |
| Overall | 196 | 172 | 87.76% |

*Panel B — Breakdown of Responding Companies by Nation and Industry*

| | *ISIC category coding* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| *Nation* | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *8* | *9* | *0* |
| Australia | 2 | 12 | 24 | 0 | 0 | 6 | 4 | 6 | 1 | 0 |
| Singapore | 1 | 1 | 23 | 0 | 3 | 8 | 2 | 6 | 0 | 0 |
| Malaysia | 1 | 3 | 19 | 0 | 0 | 2 | 3 | 3 | 0 | 0 |
| HongKong | 0 | 0 | 19 | 0 | 2 | 7 | 5 | 9 | 0 | 0 |
| Overall | 5 | 25 | 78 | 0 | 5 | 30 | 14 | 24 | 2 | 0 |

| | *Australia* | | *Singapore* | | *Malaysia* | | *Hong Kong* | |
|---|---|---|---|---|---|---|---|---|
| | *Mean* | *Median* | *Mean* | *Median* | *Mean* | *Median* | *Mean* | *Median* |
| Size[a] | US$1.01 billion | US$629 million | US$406 million | US$158 million | US$698 million | US$284 million | US$448 million | US$227 million |
| Leverage[b] | 1.16 | 0.76 | 1.55 | 0.95 | 1.29 | 0.79 | 1.58 | 1.22 |
| Profitability[c] | 0.05 | 0.05 | 0.06 | 0.04 | 0.09 | 0.08 | 0.04 | 0.05 |
| No. of directors[d] | 7.76 | 7.00 | 7.99 | 8.00 | 7.51 | 7.00 | 9.02 | 9.00 |

*Notes:* [a]Size is measured as the total assets of the firm measured in US dollars.
[b]Leverage for each firm is determined by the debt to equity ratio.
[c]Profitability is measured by the return of assets averaged over a 5-year period.
[d]Number of directors included the number of individuals on the board at the time the annual report was published.

derived from an extensive review of the prior literature (see, for example, Ernst and Ernst, 1976; Cowan et al., 1987; Belkaoui and Karpik, 1989; Guthrie and Parker, 1989, 1990; Patten, 1991, 1992, 1995; Gray et al., 1995a, 1996; Hackston and Milne, 1995). Numerous pretesting techniques were conducted to minimize any ambiguity and overlapping of interpretations.[14]

Consistent with other studies, the unit of analysis for this study was sentences. Ingram and Frazier (1980, p. 617) chose this method stating "the sentence was selected as the unit of analysis for the final research since a sentence is easily identified, is less subject to interjudge variations than phrases, classes and themes, and has been evaluated as an appropriate unit in previous research." Sentences overcome the problems of allocating a portion of a page, whilst also removing the need to account for, or standardize, the number of words (Hackston and Milne, 1995, p. 13).

To analyze the nature of disclosure, each sentence was classified into one of three categories: (1) monetary; (2) quantitative; and (3) narrative. This approach was utilized

as it was consistent with past studies (see, for example, Guthrie and Parker, 1990; Zeghal and Ahmed, 1990; Walden and Schwartz, 1997) that have attempted to measure the nature of disclosure.

The final area of analysis in this study relates to the type of disclosure. Each of the five themes of corporate social disclosure involved in this study was further subdivided into a set of broadly discriminating topics (see Appendix A). Any corporate social disclosures made by entities in their annual reports or on Web Sites were firstly classified by theme and then by topic. Once the annual report and Web Sites had been evaluated, each topic was ranked according to the average amount of space enterprises devoted to it.[15] The approach adopted in this study is similar to that provided by Guthrie and Parker (1990).

## RESULTS

### Descriptive Statistics

The overall response rate for organizations supplying their 1996 annual reports as requested and that were identified as managing their own Web Sites was 85% (172 enterprises). Respective rates for each nation were as follows: Australia 94.83% (55); Singapore 91.67% (44); Hong Kong 82.35% (42); and Malaysia 82.05% (32).[16] Due to a failure to provide their comprehensive annual report, three corporations (two from Australia and one from Malaysia) were removed from the sample. Thus, the final useable response rate was 87.76%. This compared favorably with other studies requesting information from a range of nations (see, for example, Eddie, 1996).

Table 2 Panel A summarizes the descriptive analysis of several key organizational attributes by nation. Panel B further extends Table 2 indicating the breakdown of entities from each nation by industry type based on ISIC coding. Finally, Panel C provides a brief summary of key firm attributes averaged for each nation involved in the study.

### Incidence Rate

Table 3 Panel A provides a breakdown on the incidence rate (as a raw number) of the number of companies making corporate social disclosures into three categories: (1) annual report; (2) Web Site; and (3) combined (both in the annual report and on the Web Site). A perusal of Panel A generally indicates that across the four study nations, there appears not to be any dramatic differences in the overall incidence of companies providing corporate social disclosures in annual reports relative to the number disclosing information on Web Sites. For example, in Australia, 87.27% of the companies disclosed at least one sentence of corporate social disclosure in their annual reports. Conversely, 83.63% of the entities provided such details on their Web Sites. In general, the incident rate for companies reporting in both the annual report and on their Web Sites would suggest that few companies made corporate social disclosures solely on their Web Sites.

With respect to themes, firms in Australia, Singapore, Malaysia and Hong Kong that provided corporate social disclosures in annual reports placed a higher emphasis on the human resource and management category followed generally by community issues.

**Table 3.** Incidence of Issues Recorded[a]

*Panel A*

| | *Australia* | | | *Singapore* | | | *Malaysia* | | | *Hong Kong* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Category* | *Annual reports* | *Internet* | *Combined* | *Annual reports* | *Internet* | *Combined* | *Annual reports* | *Internet* | *Combined* | *Annual reports* | *Internet* | *Combined* |
| Environment | 32 | 39 | 29 | 5 | 1 | 1 | 9 | 8 | 8 | 3 | 3 | 2 |
| Energy | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 2 |
| HRM[b] | 41 | 45 | 35 | 28 | 31 | 27 | 25 | 17 | 15 | 24 | 14 | 14 |
| Products[c] | 28 | 42 | 28 | 24 | 33 | 22 | 12 | 19 | 10 | 18 | 23 | 15 |
| Community | 32 | 27 | 21 | 16 | 9 | 9 | 18 | 16 | 16 | 12 | 8 | 7 |
| Overall | 48 | 46 | 42 | 30 | 35 | 26 | 26 | 21 | 17 | 31 | 27 | 25 |

*Panel B*

| | *Australia* | | | *Singapore* | | | *Malaysia* | | | *Hong Kong* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *ISIC category code* | *Annual reports* | *Internet* | *Combined* | *Annual reports* | *Internet* | *Combined* | *Annual reports* | *Internet* | *Combined* | *Annual reports* | *Internet* | *Combined* |
| 1 | 2 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 |
| 2 | 11 | 12 | 10 | 0 | 1 | 0 | 1 | 2 | 1 | 0 | 0 | 0 |
| 3 | 21 | 21 | 19 | 19 | 15 | 14 | 16 | 12 | 11 | 16 | 15 | 12 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 1 |
| 6 | 5 | 4 | 2 | 5 | 5 | 5 | 2 | 2 | 1 | 4 | 4 | 3 |
| 7 | 3 | 4 | 2 | 1 | 1 | 1 | 3 | 1 | 1 | 3 | 3 | 2 |
| 8 | 6 | 5 | 5 | 4 | 4 | 3 | 2 | 3 | 2 | 8 | 8 | 6 |
| 9 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

*Notes:* [a]Industry description per ISIC category code: (1) Agriculture, hunting, forestry and fishing; (2) mining and quarrying; (3) manufacturing; (4) electricity, gas and water; (5) construction; (6) wholesale and retail trade and restaurants and hotels; (7) transport, storage and communication; (8) financing, insurance, real estate and business services; (9) community, social and personal services; and (0) activities not adequately defined.

[b]HRM = Human Resources and Management.

[c]Products = Products and Customers.

**Table 4.** Quantity of Disclosure by Average Number of Sentences

| Category | Australia | | | Singapore | | | Malaysia | | | Hong Kong | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Annual reports | Internet | Combined | Annual reports | Internet | Combined | Annual reports | Internet | Combined | Annual reports | Internet | Combined |
| Environment | 5.63 | 10.21 | 9.56 | 0.97 | 0.56 | 0.56 | 1.1 | 0.96 | 0.96 | 0.99 | 0.64 | 0.67 |
| Energy | 0.11 | 0 | 0 | 0 | 0 | 0 | 0.32 | 0 | 0 | 0.1 | 0.1 | 0.1 |
| HRM[a] | 6.52 | 11.84 | 12.64 | 8.93 | 13.96 | 12.95 | 3.48 | 4.58 | 4.65 | 5.29 | 4.58 | 4.58 |
| Products[b] | 2.15 | 5.36 | 5.85 | 6.29 | 11.33 | 13.61 | 1.98 | 3.54 | 4.12 | 2.13 | 3.94 | 4.1 |
| Community | 3.73 | 3.54 | 3.65 | 7.96 | 6.54 | 6.54 | 6.47 | 6.76 | 6.76 | 2.02 | 1.53 | 1.61 |
| Overall | 18.14 | 30.95 | 31.7 | 24.15 | 32.39 | 33.66 | 13.35 | 15.84 | 16.49 | 10.53 | 10.79 | 11.06 |

*Note:* [a]HRM = Human Resources and Management.
[b]Products = Products and Customers.

**Table 5.** Independent *t*-tests by Country

| *Category* | *Australia* | *Singapore* | *Malaysia* | *Hong Kong* |
|---|---|---|---|---|
| Environmental | 0.000* | 0.756 | 0.842 | 0.537 |
| Energy | 0.915 | N/A | 0.651 | 0.946 |
| HRM[a] | 0.016* | 0.037* | 0.361 | 0.741 |
| Product[b] | 0.045* | 0.005* | 0.084 | 0.261 |
| Community | 0.897 | 0.627 | 0.951 | 0.658 |
| Overall | 0.009* | 0.067** | 0.214 | 0.819 |

*Notes:* [a]HRM = Human Resources and Management.
[b]Products = Products and Customers.
*Significant at the 5% confidence level.
**Significant at the 10% confidence level.

Australian firms placed a higher degree of importance on environmental matters than companies in Singapore, Malaysia and Hong Kong. These results are consistent with the prior literature such as Guthrie and Parker (1990), Andrews et al. (1989), Teoh and Thong (1984) and Williams (1998).

A comparison of the incidence rate for corporate social disclosures in annual reports as compared to Web Sites does not appear to indicate considerable differences apart from the theme of products and customers. Across all four nations, the incidence of disclosure on this particular theme was higher for Web Sites than annual reports. In Australia, only 50.91% of the corporations provided at least one sentence on products and customers in annual reports compared to 76.36% on Web Sites.

Finally, there appeared to be little intra-industry variation in the number of enterprises disclosing in annual reports relative to Web Sites. A perusal of Panel B in Table 3 indicates that in the case of Australia, for example, of the 21 manufacturing-based firms surveyed that provided corporate social details in annual reports, 19 made reference to these issues on their Web Sites.

## Quantity of Disclosure

Table 4 shows the average quantity of corporate social disclosure, measured as total sentences divided by number of companies in each country providing at least one sentence. Findings are again divided into three categories as above and broken down into the five themes. Overall, results appear to suggest that firms in Australia and Singapore provide, on average, a greater quantity of corporate social disclosure on their Web Sites than in annual reports. In Malaysia, there is an increase in quantity favoring Web Sites though the difference is relatively small compared to Australian and Singaporean organizations. Conversely, for Hong Kong, the trend is the reverse, with the average amount of disclosure being lower on Web Sites compared to the annual reports. With specific regard to firms reporting in their annual reports and on Web Sites, the average amount of disclosure on Web Sites for these firms was in excess of the averages calculated for the other two categories across all four nations.

Findings for the respective themes of corporate social disclosure show that companies in the four study nations have some homogeneity with respect to human resource and

**Table 6.** Form of Sentences

| | Panel A | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Australia | | | | Singapore | | | |
| Category | Monetary | Quantitative | Narrative | Total | Monetary | Quantitative | Narrative | Total |
| *Environment* | | | | | | | | |
| Annual reports | 21 | 36 | 213 | 270 | 2 | 4 | 23 | 29 |
| % (1) | 25.30% | 27.48% | 32.47% | 31.04% | 6.25% | 6.45% | 3.66% | 4.02% |
| % (2) | 7.77% | 13.32% | 78.91% | 100.00% | 6.87% | 13.75% | 79.38% | 100.00% |
| Internet | 9 | 15 | 446 | 470 | 0 | 2 | 18 | 20 |
| % (1) | 18.00% | 10.79% | 36.09% | 32.99% | 0.00% | 3.13% | 1.70% | 1.73% |
| % (2) | 1.92% | 3.19% | 94.89% | 100.00% | 0.00% | 10.20% | 89.80% | 100.00% |
| Combined | 6 | 13 | 383 | 402 | 0 | 1 | 14 | 15 |
| % (1) | 15.00% | 10.08% | 32.91% | 30.16% | 0.00% | 3.13% | 1.64% | 1.66% |
| % (2) | 1.49% | 3.24% | 95.27% | 100.00% | 0.00% | 6.87% | 93.13% | 100.00% |
| *Energy* | | | | | | | | |
| Annual reports | 0 | 0 | 5 | 5 | 0 | 0 | 0 | 0 |
| % (1) | 0.00% | 0.00% | 0.80% | 0.61% | 0.00% | 0.00% | 0.00% | 0.00% |
| % (2) | 0.00% | 0.00% | 100.00% | 100.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Internet | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % (1) | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| % (2) | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Combined | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| % (1) | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| % (2) | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| *HRM* | | | | | | | | |
| Annual reports | 26 | 47 | 240 | 313 | 11 | 19 | 238 | 268 |
| % (1) | 31.33% | 35.88% | 36.54% | 35.94% | 34.38% | 30.65% | 37.73% | 36.98% |
| % (2) | 8.31% | 15.02% | 76.67% | 100.00% | 4.11% | 7.09% | 88.80% | 100.00% |
| Internet | 21 | 63 | 461 | 545 | 24 | 38 | 427 | 489 |
| % (1) | 42.00% | 45.32% | 37.31% | 38.26% | 66.67% | 59.38% | 41.27% | 43.10% |
| % (2) | 3.86% | 11.57% | 84.58% | 100.00% | 4.91% | 7.78% | 87.31% | 100.00% |

*(continued)*

**Table 6.** (Continued)

| | Panel A | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Australia | | | | Singapore | | | |
| *Category* | *Monetary* | *Quantitative* | *Narrative* | *Total* | *Monetary* | *Quantitative* | *Narrative* | *Total* |
| Combined | 20 | 57 | 454 | 531 | 11 | 16 | 310 | 337 |
| % (1) | 50.00% | 44.19% | 39.05% | 39.87% | 78.57% | 50.00% | 37.35% | 38.47% |
| % (2) | 3.77% | 10.74% | 85.50% | 100.00% | 3.27% | 4.75% | 91.98% | 100.00% |
| *Products* | | | | | | | | |
| Annual reports | 18 | 21 | 64 | 103 | 9 | 18 | 162 | 189 |
| % (1) | 21.69% | 16.03% | 9.78% | 11.85% | 28.13% | 29.03% | 25.65% | 26.05% |
| % (2) | 17.44% | 20.35% | 62.21% | 100.00% | 4.77% | 9.54% | 85.69% | 100.00% |
| Internet | 12 | 44 | 191 | 247 | 4 | 7 | 386 | 397 |
| % (1) | 24.00% | 31.65% | 15.43% | 17.32% | 11.11% | 10.94% | 37.30% | 34.98% |
| % (2) | 4.87% | 17.85% | 77.29% | 100.00% | 1.01% | 1.77% | 97.23% | 100.00% |
| Combined | 8 | 44 | 194 | 246 | 2 | 6 | 346 | 354 |
| % (1) | 20.00% | 34.11% | 16.66% | 18.45% | 14.29% | 18.75% | 41.71% | 40.43% |
| % (2) | 3.26% | 17.91% | 78.84% | 100.00% | 0.57% | 1.70% | 97.74% | 100.00% |
| *Community* | | | | | | | | |
| Annual reports | 18 | 27 | 134 | 179 | 10 | 21 | 208 | 239 |
| % (1) | 21.69% | 20.61% | 20.41% | 20.56% | 31.25% | 33.87% | 32.96% | 32.96% |
| % (2) | 10.05% | 15.08% | 74.87% | 100.00% | 4.19% | 8.79% | 87.02% | 100.00% |
| Internet | 8 | 17 | 138 | 163 | 8 | 17 | 204 | 229 |
| % (1) | 16.00% | 12.23% | 11.16% | 11.44% | 22.22% | 26.56% | 19.73% | 20.19% |
| % (2) | 4.91% | 10.44% | 84.65% | 100.00% | 3.49% | 7.43% | 89.08% | 100.00% |
| Combined | 6 | 15 | 132 | 153 | 1 | 9 | 160 | 170 |
| % (1) | 15.00% | 11.63% | 11.38% | 11.51% | 7.14% | 28.13% | 19.30% | 19.43% |
| % (2) | 3.91% | 9.78% | 86.30% | 100.00% | 0.59% | 5.29% | 94.12% | 100.00% |

*(continued)*

**Table 6.** (Continued)

| Panel A | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | *Australia* | | | | *Singapore* | | | |
| *Category* | *Monetary* | *Quantitative* | *Narrative* | *Total* | *Monetary* | *Quantitative* | *Narrative* | *Total* |
| *Overall* | | | | | | | | |
| Annual reports | 83 | 131 | 657 | 871 | 32 | 62 | 631 | 725 |
| % (1) | 100.00% | 100.00% | 100.00% | | 100.00% | 100.00% | 100.00% | |
| Internet | 50 | 139 | 1235 | 1424 | 36 | 64 | 1034 | 1134 |
| % (1) | 100.00% | 100.00% | 100.00% | | 100.00% | 100.00% | 100.00% | |
| Combined | 40 | 129 | 1162 | 1331 | 14 | 32 | 829 | 875 |
| % (1) | 100.00% | 100.00% | 100.00% | | 100.00% | 100.00% | 100.00% | |

| Panel B | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | *Malaysia* | | | | *Hong Kong* | | | |
| *Category* | *Monetary* | *Quantitative* | *Narrative* | *Total* | *Monetary* | *Quantitative* | *Narrative* | *Total* |
| *Environment* | | | | | | | | |
| Annual reports | 1 | 4 | 24 | 29 | 0 | 5 | 26 | 31 |
| % (1) | 10.00% | 9.76% | 7.97% | 8.24% | 0.00% | 18.52% | 8.64% | 9.40% |
| % (2) | 3.50% | 13.99% | 82.52% | 100.00% | 0.00% | 16.29% | 83.71% | 100.00% |
| Internet | 0 | 4 | 16 | 20 | 0 | 4 | 13 | 17 |
| % (1) | 0.00% | 12.12% | 5.50% | 6.06% | 0.00% | 20.00% | 4.93% | 5.93% |
| % (2) | 0.00% | 19.84% | 80.16% | 100.00% | 0.00% | 23.15% | 76.85% | 100.00% |
| Combined | 0 | 3 | 13 | 16 | 0 | 4 | 13 | 17 |
| % (1) | 0.00% | 11.11% | 5.34% | 5.82% | 0.00% | 23.53% | 4.93% | 6.05% |
| % (2) | 0.00% | 18.38% | 81.62% | 100.00% | 0.00% | 23.88% | 76.12% | 100.00% |
| *Energy* | | | | | | | | |
| Annual reports | 1 | 1 | 6 | 8 | 0 | 0 | 3 | 3 |
| % (1) | 10.00% | 2.44% | 2.13% | 2.40% | 0.00% | 0.00% | 1.04% | 0.95% |
| % (2) | 12.02% | 12.02% | 75.96% | 100.00% | 0.00% | 0.00% | 100.00% | 100.00% |

*(continued)*

**Table 6.** (Continued)

| Panel B | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Malaysia | | | | Hong Kong | | | |
| Category | Monetary | Quantitative | Narrative | Total | Monetary | Quantitative | Narrative | Total |
| Internet | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| % (1) | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 1.00% | 0.93% |
| % (2) | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 100.00% |
| Combined | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 |
| % (1) | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.97% | 0.90% |
| % (2) | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 100.00% | 100.00% |
| *HRM* | | | | | | | | |
| Annual reports | 4 | 11 | 75 | 90 | 2 | 16 | 146 | 164 |
| % (1) | 40.00% | 26.83% | 25.49% | 26.07% | 100.00% | 59.26% | 49.08% | 50.24% |
| % (2) | 4.42% | 12.16% | 83.42% | 100.00% | 1.22% | 9.76% | 89.02% | 100.00% |
| Internet | 2 | 8 | 86 | 96 | 1 | 11 | 112 | 124 |
| % (1) | 33.33% | 24.24% | 29.35% | 28.91% | 50.00% | 55.00% | 41.46% | 42.45% |
| % (2) | 2.08% | 8.32% | 89.60% | 100.00% | 0.81% | 8.90% | 90.30% | 100.00% |
| Combined | 1 | 6 | 72 | 79 | 0 | 10 | 105 | 115 |
| % (1) | 25.00% | 22.22% | 28.90% | 28.20% | 0.00% | 58.82% | 40.43% | 41.38% |
| % (2) | 1.27% | 7.59% | 91.14% | 100.00% | 0.00% | 8.73% | 91.27% | 100.00% |
| *Products* | | | | | | | | |
| Annual reports | 0 | 4 | 47 | 51 | 0 | 2 | 64 | 66 |
| % (1) | 0.00% | 9.76% | 16.04% | 14.83% | 0.00% | 7.41% | 21.53% | 20.23% |
| % (2) | 0.00% | 7.77% | 92.23% | 100.00% | 0.00% | 3.03% | 96.97% | 100.00% |
| Internet | 1 | 5 | 68 | 74 | 0 | 3 | 103 | 106 |
| % (1) | 16.67% | 15.15% | 23.27% | 22.35% | 0.00% | 15.00% | 38.38% | 36.52% |
| % (2) | 1.35% | 6.73% | 91.93% | 100.00% | 0.00% | 2.82% | 97.18% | 100.00% |
| Combined | 0 | 4 | 66 | 70 | 0 | 1 | 102 | 103 |
| % (1) | 0.00% | 14.81% | 26.49% | 24.98% | 0.00% | 5.88% | 39.26% | 37.04% |
| % (2) | 0.00% | 5.71% | 94.29% | 100.00% | 0.00% | 0.98% | 99.02% | 100.00% |

*(continued)*

**Table 6.** (Continued)

| | Panel B | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Malaysia | | | | Hong Kong | | | |
| *Category* | *Monetary* | *Quantitative* | *Narrative* | *Total* | *Monetary* | *Quantitative* | *Narrative* | *Total* |
| *Community* | | | | | | | | |
| Annual reports | 4 | 21 | 143 | 168 | 0 | 4 | 59 | 63 |
| % (1) | 40.00% | 51.22% | 48.37% | 48.46% | 0.00% | 14.81% | 19.71% | 19.18% |
| % (2) | 2.38% | 12.48% | 85.14% | 100.00% | 0.00% | 6.39% | 93.61% | 100.00% |
| Internet | 3 | 16 | 123 | 142 | 1 | 2 | 38 | 41 |
| % (1) | 50.00% | 48.48% | 41.87% | 42.68% | 50.00% | 10.00% | 14.22% | 14.18% |
| % (2) | 2.11% | 11.27% | 86.62% | 100.00% | 2.42% | 4.84% | 92.74% | 100.00% |
| Combined | 3 | 14 | 98 | 115 | 1 | 2 | 37 | 40 |
| % (1) | 75.00% | 51.85% | 39.27% | 40.99% | 100.00% | 11.76% | 14.41% | 14.55% |
| % (2) | 2.61% | 12.18% | 85.21% | 100.00% | 2.48% | 4.97% | 92.55% | 100.00% |
| *Overall* | | | | | | | | |
| Annual reports | 10 | 41 | 296 | 347 | 2 | 27 | 297 | 326 |
| % (1) | 100.00% | 100.00% | 100.00% | | 100.00% | 100.00% | 100.00% | |
| Internet | 6 | 33 | 294 | 333 | 2 | 20 | 269 | 291 |
| % (1) | 100.00% | 100.00% | 100.00% | | 100.00% | 100.00% | 100.00% | |
| Combined | 4 | 27 | 249 | 280 | 1 | 17 | 259 | 277 |
| % (1) | 100.00% | 100.00% | 100.00% | | 100.00% | 100.00% | 100.00% | |

management (apart from Malaysia) and product and customer-related disclosures, with a greater amount of space being devoted to these issues on Web Sites. For example, in Singapore, the average amount of disclosure on product and customer-related issues on Web Sites was double that found in annual reports. It is also important to note that the increase was even greater for companies reporting in both their annual reports and on Web Sites. Australian organizations also appear to provide more detail on environmental issues on their Web Sites than in annual reports. Variations between the level of disclosure on energy- and community-related issues appeared relatively minor for all nations.

Independent *t*-tests (see Table 5) were used to statistically analyze the difference in the average amount of disclosure in annual reports compared to Web Sites for any significance to support the conclusions drawn from Table 4. In relation to the overall amount of disclosure, the average quantity of sentences for corporate social disclosures supplied by Australian and Singaporean entities in their annual reports was statistically different from the average amount of corporate social disclosure on the Web Sites at the 5% and 10% confidence interval, respectively. The differences for Malaysia and Hong Kong were not of statistical significance.

Results in Table 5 further indicate that in Australia and Singapore, the average amount of disclosure by companies on human resource and management issues on Web Sites was statistically different than in annual reports. The quantity of product and customer-related disclosure made on the two forms of media were also significantly different in Australia and Singapore as well as in Malaysia. Finally, the difference in the amount of environmental disclosure on Web Sites by Australian companies to that in annual reports was statistical significant at the 5% confidence level.

## Nature of Sentences

A cross-classification of the medium of disclosure broken down into the nature of disclosure (monetary, quantitative and narrative) is presented in Table 6 Panels A and B. Consistent with prior literature (see, for example, Guthrie and Mathews, 1985, Guthrie and Parker, 1990; Zeghal and Ahmed, 1990; Gray et al., 1995a; 1995b), the findings in Table 6 indicate that the dominant nature of disclosure of corporate social details is narrative. This finding was consistent for both forms of medium surveyed (annual report and Internet) across all four nations included in the project and for the five specific themes of corporate social disclosure analyzed. Two interesting points, however, are worth noting.

First, with respect to international differences, it would appear that Australian companies tended to supply slightly more quantitative and monetary information on corporate social matters in their annual reports and on Web Sites relative to their counterparts in Singapore, Malaysia and Hong Kong. This was particularly evident for human resources and management, product and customer and community-related disclosures. For example, with respect to human resources and management, approximately 75% of the disclosures by Australian companies in annual reports were merely narrative compared to 89%, 83% and 89% for their counterparts in Singapore, Malaysia and Hong Kong, respectively.

Second, and perhaps most importantly, the percentage of narrative sentences contained on Web Sites relating to corporate social disclosures appeared to be higher in many cases

**Table 7.** Three Top Discussed Issues for Each Theme [20]

| *Nation* | *Ranking no. 1* | *Ranking no. 2* | *Ranking no. 3* |
|---|---|---|---|
| | *Panel A: Environmental Issues* | | |
| Australia | General environmental considerations and statements | Environmental — product and process-related | Environmental policy statement |
| Singapore | General environmental considerations and statements | Environmental education programs, awards and studies | Environmental — product and process related |
| Hong Kong | Environmental — product and process-related | Environmental education program, awards and studies | General environmental considerations and statements |
| Malaysia | Environmental education programs, awards and studies | Environmental policy statement | General environmental considerations and statements |
| | *Panel B: Human Resource and Management* | | |
| Australia | Health and safety | Improvement of working conditions, department closures and restructuring | Industrial relations |
| Singapore | Improvement of working conditions, department closures and restructuring | Employee morale and relations | Health and safety |
| Hong Kong | Improvement of working conditions, department closures and restructuring | Employee profiles (*employee assistance, remuneration and benefits*) | Employee assistance, remuneration and benefits (*employee profiles*) |
| Malaysia | Improvement of working conditions, department closures and restructuring | Employee assistance, remuneration and benefits | Health and safety |
| | *Panel C: Products and Customers* | | |
| Australia | Product development and research | Product quality information | Product safety |
| Singapore | Product development and research | Product quality information | Consumer satisfaction and feedback |
| Hong Kong | Product quality information | Product development and research | Consumer satisfaction and feedback |
| Malaysia | Product development and research | Product quality information | Product safety |
| | *Panel D: Community* | | |
| Australia | Donations to community groups and charitable bodies | Sponsoring of public health, sporting and recreational projects (*funding scholarship programs and activities*) | Funding scholarship programs and activities (*sponsoring of public health, sporting and recreational programs*) |

*(continued)*

**Table 7.** (Continued)

| *Nation* | *Ranking no. 1* | *Ranking no. 2* | *Ranking no. 3* |
|---|---|---|---|
| Singapore | Donations to community groups and charitable bodies | Supporting national pride/ government-sponsored programs | Sponsoring education conferences, seminars and development |
| Hong Kong | Donations to community groups and charitable bodies | Sponsoring of public health, sporting and recreational projects | Aiding medical research |
| Malaysia | Donations to community groups and charitable bodies | Funding scholarship programs and activities | Supporting national pride/government sponsored programs |

*Note:* Due to the small amount and low number of entities making energy-related disclosure relative to the other four themes of corporate social disclosure, an in depth evaluation of the types of energy disclosures was not undertaken.

compared to annual reports. For instance, in Australia and Singapore, the percentage of narrative sentences on products and customers in annual reports was 62% and 86%, respectively. The percentage of narrative sentences for this theme on Web Sites was 77% for Australian firms and 97% for Singaporean entities. A review of percentages for companies providing corporate social disclosures in both their annual reports and on Web Sites further supports the findings that companies appear to prefer to disclose narrative information on their Web Sites rather than quantitative and monetary items.

## Types of Disclosure

Table 7 indicates the three highest ranked topics in each theme in each respective nation. Two major findings can be highlighted from Table 7. First, the order of ranking of topics was virtually identical regardless of the form of media (annual reports or Web Site) considered. That is, companies in Singapore, for instance, generally emphasized the same topics in precisely the same order in both their annual reports and on Web Sites for all of the five themes of corporate social disclosure. The same observation is generally true in Australia, Hong Kong and Malaysia. In only two cases was the order of ranking different between that for annual reports and Web Sites. Cells containing topic description in parentheses and italics indicate these cases in Table 7. The first difference in ranking involved Hong Kong companies that ranked "Employee profiles" as the second most emphasized topic in annual reports with discussion on "Employee remuneration, assistance and benefits" being the third most important. The order of ranking for these two human resource and management topics is reversed when considering Web Sites. The second situation where ranking between annual reports and Web Sites differed involved Australian companies and the community-related topics of "Sponsoring of public health, sporting and recreational projects" and "Funding scholarship programs and activities." In annual reports, Australian enterprises placed a greater emphasis on the first topic followed by the latter. Again, the ranking of these two community-related topics was reversed when discussed on Web Sites.

The second major point of note in Table 7 involves the observation that for each theme of corporate social disclosure, the topics being emphasized by companies from the four nations in their annual reports and on Web Sites varied across national boundaries. From Table 7 Panel A, for example, it can be seen that Australian and Singaporean companies placed the greatest emphasis on "General environmental statements and considerations" about what aspects of the business operations were allocated to controlling environmental pollution (that is, noise, air, water and visual quality). Such statements also provided some indication of the capital employed and research and development expenditures experienced by the firm to maintain satisfactory environmental standards. Australian and Singaporean entities diverged in the ranking of the second most popular environmental topic. Organizations from the former nation provided information on "Product and process-related considerations," whilst those from the latter detailed "Environmental education programs" undertaken, awards received and studies commissioned by the entity. The second top ranked environmental topics in Australia and Singapore featured heavily amongst Hong Kong and Malaysian firms. In Hong Kong, "Product and process-related considerations" on the environment were disclosed the most, whilst the top topic in Malaysia was "Environmental education programs." Panels B (Human resources and management), C (Products and customers) and D (Community) in Table 7 also indicate variations in ranking of topics across national boundaries. It is further noted that the difference in ranking for Product and customers are not as diverse as for the other two themes.

## ANALYSIS OF FINDINGS AND MAJOR IMPLICATIONS

In the Literature Review section, propositions were formed based on a review of the literature. The first proposition suggesting Web Sites, rather than annual reports, may offer companies a more effective medium to disseminate corporate social information about the firm that is designed to develop, sustain and legitimize relations with the relevant public, create a positive image and deflect possible government scrutiny. The second proposition implied that regardless of the medium used, corporate social disclosure practices will vary across national boundaries.

With respect to the first proposition, findings from this study provide some support. Evidence indicated that firms in Australia and Singapore provided, on average, significantly more corporate social disclosure on their Web Sites than corresponding annual reports. There was no significant difference in the average amount of disclosure for the two media forms for Hong Kong and Malaysian enterprises. For Australian companies, the differences appear to be largely attributable to an increase in disclosures related to the environment, human resources and management and products and customers. Differences in Singapore can be explained in part by significantly greater amounts of human resource and management and product and customer-related disclosures on Web Sites rather than in annual reports. Additional results related to the nature of each sentence of corporate social disclosure found that the increase in disclosure levels between annual reports and Web Sites for Australian and Singaporean companies can be largely attributed to greater levels of narrative discussion via the latter medium.

Three reasons are suggested to explain why Australian and Singapore listed companies provide significantly greater corporate social disclosure on Web Sites than in annual

reports, whilst their counterparts in Hong Kong and Malaysia do not. First, in a recent report on the annual expenditure by companies in the Asia-Pacific supporting Web Sites, the average for Australian and Singaporean organizations were US$590,000 and US$460,000, respectively. Such average budget allocations for Internet-related technology were relatively high compared to counterparts in Malaysia (US$210,000) and Hong Kong (US$71,000) (Lai, 1998). The willingness of management in Australia and Singapore to invest in developing their Web Sites and Internet technology may, therefore, suggest that such managers perceive these facilities to offer their company an effective mechanism for disseminating a particular message to a given audience relative to managers in Malaysia and Hong Kong.

A second reason why management in Hong Kong and Malaysia may not release as much corporate social information on their Web Sites compared to Australia and Singapore is due to a perception that the target market may be too small, with access to computers being small and/or communication networks being inefficient. This may be particularly true in the case of Malaysia which is the only nation from the four surveyed that is classified as a developing nation. Management in Malaysia and Hong Kong may feel that use of Web Sites is not as cost effective at present compared to using annual reports. The reverse, however, may be seen in relation to management in Australia and Singapore.

Finally, institutional bodies in Australia and Singapore may be placing a greater emphasis on a more rapid shift toward a reliance on electronic business and communication mechanisms than Hong Kong and Malaysia. Banking institutions in Australia and Singapore, for example, have begun to promote and launch Web Sites through which customers can conduct transactions. A recent report indicated reluctance amongst Hong Kong banking institutions to adopt electronic–commerce mechanisms (Chan, 1998). Greater acceptance of the electronic media as the so-called "way of the future" amongst Australian and Singapore institutional bodies may, therefore, be influencing companies in these two nations to report more heavily on Web Sites than counterparts in Hong Kong and Malaysia.

The major international implication of the results in regard to Proposition 1 is that it appears that Web Sites do offer companies in the four study nations an alternative mechanism for disseminating corporate social disclosures. Furthermore, Web Sites appear to offer additional convenience for disclosing more information even though that may only be in a narrative format. Utilization of this mechanism, however, is not uniform across all four nations. The consequence of this finding may be that international stakeholders reviewing the corporate social disclosure of companies above and beyond that found in annual reports via the World Wide Web will only find additional information from entities in specific countries. Stakeholders will have to rely on other sources when seeking additional information.

The second proposition of this study is also supported by the findings. Results indicate significant differences in the average amount of corporate social disclosure across national boundaries, regardless of the form of media utilized. Findings in Table 7 further show that different topics are emphasized by firms in the four study nations for the relevant themes of corporate social disclosure. These findings are consistent with Williams (1998). He indicated that the socio-political and economic structure of a nation influences corporate social disclosures. In Malaysia and Hong Kong, therefore, the socio-political and economic conditions may not provide suitable incentives for such disclosures as compared

to Australia and Singapore. Jaggi and Zhao (1996), for example, reported that Hong Kong managers appeared reluctant to disclose environmental information for fear of increased costs and liabilities.

An important implication of findings related to Proposition 2 suggests that the social, political and economic environment within which a firm operates may continue, to a large extent, to override the disclosure policies of a firm regardless of the form and global nature of the media used. It was argued in the introduction and in the Literature review section that the World Wide Web allows a company to disseminate information to a global audience instantaneously, whilst also allowing stakeholders anywhere in the world to access that data at the same time. The greater freedom to address a wider global audience was considered to offer firms a potential incentive to disclose corporate social information that addressed global stakeholder needs rather than those at a national level. This study shows, however, that companies in Australia, Singapore, Hong Kong and Malaysia were still heavily influenced by national factors. That is, despite in some cases providing additional details via Web Sites, the types of information disclosed appear to reflect national, rather than global concerns.

A possible regulatory implication can be drawn from the findings related to Proposition 2. If national bodies introduce regulations to dictate the information firms may or may not disclose on their Web Sites, then at present, this is unlikely to impede companies as they appear to address the needs of stakeholders at the country rather than the global level. In the event that the World Wide Web does provide the necessary incentive for firms to disclose on a more global level as the significance of this medium grows, then imposition of regulations at this point in time could be a disadvantage for potential global harmonization of accounting disclosure practices. National regulatory bodies may need to consider the future of disclosure practices and the benefits offered by such forms of media as the World Wide Web before taking any regulatory action at the country level.

## CONCLUSIONS AND FUTURE RESEARCH

This study sought to investigate the corporate social disclosure practices of listed firms in Australia, Singapore, Hong Kong and Malaysia on Web Sites relative to annual reports. Findings indicate that Australian and Singaporean firms disclose significantly more corporate social information on Web Sites than in annual reports, the differences largely attributable to greater narrative discussion. Hong Kong- and Malaysian-based companies did not provide any significant differences. Results are in part consistent with Zeghal and Ahmed (1990), who found that firms in Canada use alternative media to disseminate corporate social information. A second major finding from this study is that corporate social disclosure practices varied across national boundaries. This finding is consistent with past research (see, for example, Roberts, 1990; Gray et al., 1996; Williams, 1998). It also implies that the World Wide Web, though offering greater access for global stakeholders and, therefore, providing firms with the incentive to meet these needs, companies still sought to address national interests. Consequently, it is suggested that the World Wide Web is not currently acting as an indirect mechanism for enhancing harmonization of accounting disclosure practices.

This study makes a number of important contributions. First, this study provides initial indications of the use of electronic media, in particular, the World Wide Web, in disclosing information rather than just traditional print media.[17] Second, this paper finds that the use of alternative media to report on corporate social issues is not uniform, with national differences being observed. This result indicates that national factors are important in influencing corporate social disclosure practices of firms regardless of the media used. Finally, this study expanded on past literature by considering the disclosure practices of a larger number of organizations across a wider industry spectrum than previous research.

As with most research, this study has a limited scope. This investigation has only compared and contrasted those companies operating Web Sites, thus limiting the type and form of organization to which these results can be inferred. It may be suggested that companies included in this study include only those with the financial capabilities to support such sites and/or operate in a sector of the market that perceives use of this mass medium to be of benefit. Furthermore, this study looked at only two forms of mass media — annual reports and Web Sites. As noted above, management may utilize a number of mass communication mechanisms. A further limitation of this study is that it has only considered companies operating in nations sufficiently developed with respect to telecommunications and computing services to support Web Sites.

Future research would be useful, therefore, to expand on the findings of this paper and to overcome some of the limitations. Studies in the future could include other alternative forms to provide a wider scope for reference. Comparisons could also be made to companies not utilizing Web Sites, but other forms of mass communication to discern any potential differences. A survey would be useful to determine more precisely the motives and perceptions of management in the four study nations toward the disclosure of corporate social information on Web Sites relative to annual reports. In addition, future endeavours should be undertaken to investigate the changes in corporate social disclosures across time on Web Sites. This study has compared and contrasted disclosure on Web Sites and annual reports at one time. Web Sites offer the advantage over annual reports of being able to provide more timely information. Efforts should be undertaken to consider this point. As noted earlier, this study has considered four nations within the one region. Additional research can be conducted in the future on practices amongst companies in different nations. Finally, this study should be expanded to include additional countries to compare and contrast for potential variation in nations with different social, political and economic systems.

## APPENDIX A.

In order to evaluate the specific corporate social disclosures within each theme being made by companies in the four nations studied, each theme was broken in subcategories or topics. This subclassification scheme is shown as follows:

*Environment*

1. General environmental considerations and statements
2. Environmental policy statement

3. Environmental audit
4. Environmental — product and process-related
5. Environmental financially related data
6. Sustainability
7. Environmental aesthetics
8. Environmental education programs, awards and studies

*Energy*

1. Energy conversion
2. Energy efficiency
3. Utilization of waste materials
4. Recycling and associated energy savings
5. Efforts to reduce energy consumption
6. Increasing of product efficiency
7. Research on energy conservation
8. Awards

*Human resources and management*

1. Health and safety
2. Employment of minorities or women
3. Employee assistance, remuneration and benefits
4. Employee profiles
5. Employee morale and relations
6. Industrial relations
7. Employee welfare
8. Employee training and conditions
9. Improvement of working conditions, department closures and restructuring

*Products and customers*

1. Product development and research
2. Product safety
3. Product quality information
4. Consumer information
5. Consumer satisfaction and feedback
6. Consumer awards
7. Actions in response to consumer response

*Community*

1. Donations to community groups and charitable bodies
2. Student employment
3. Sponsoring public health, sporting and recreational projects
4. Aiding medical research
5. Sponsoring educational conferences, seminars or art exhibits
6. Funding scholarship programmes or activities
7. Supporting national pride/government sponsored campaigns
8. Sponsoring community self-help activities

9. Supporting the development of local industries or community industries
10. Supporting community programmes and activities

For further information on these categories, please contact the authors.

## NOTES

1. For some companies in Singapore and Hong Kong, annual reports and Web Sites provided both English and Chinese sections. In the case of Malaysia, some companies provided both Malay and English translations. The authors were able to translate Malay and Chinese sections due to familiarity with the languages. No significant differences were noted in regard to the Web Sites and annual reports providing two language versions.
2. It should be noted that the study was limited to four nations in the Asia-Pacific region due to pragmatic reasons such as cost.
3. Previous studies have noted variations in the corporate social disclosure practices in annual reports amongst firms in Australia, Singapore, Hong Kong and Malaysia (Williams, 1998).
4. At the beginning of 1990s hard drives in personal computers for example could only store up to 200 megabytes of data. As we approach the end of the decade, the majority of personal computers sold on the market have hard drives capable of storing four plus gigabytes of data. Computer languages have also altered, enabling new more efficient coding procedures for storage of data.
5. Bourgeois political economy was mainly developed from the works of J.S Mill and his students.
6. Neoclassical and radical political economy theory are two other leading forms of this theoretical perspective. Neoclassical political economy theory was considered inappropriate due to a flaw in the perceived relationship between the nation of corporate social disclosures and the conceptual underlying assumption (for example, perfectly competitive markets) of neoclassical theory (Gray et al., 1988; Gray et al., 1996). Radical political economy theory, based largely on Marxist theory, was not applied as it offers few insights into voluntary disclosures being more applicable to mandatory issues (see, for example, Gray et al., 1995a).
7. Simply put, this implies that a number of different individuals, institutions and organizations, seeking to preserve their own self-interests, attempt to operate within the system through various relationships with others (see, for example, Dahl, 1982, 1986).
8. The example given is not intended to be universal. This is but one of a number of different examples that could be used to describe how corporate social information can be used as an effective method of preserving the self-interests in the face of social and political pressures. For further example, refer to Lindbolm (1994).
9. Previous research (see, for example, Patten, 1992; Roberts, 1992; Gray et al., 1995b) has indicated that a number of organizational attributes may influence corporate social disclosures. Given that this study was primarily exploratory, attempting to analyze the level of disclosure between information supplied on Web Sites and in annual reports, controls for such factors were not applied.
10. It must be acknowledged that despite all efforts, not all publicly listed companies on the stock exchanges at the prescribed date that may have operated their own Web Sites may have been located due to limitations of the directories and search engines used. Nonetheless, it is felt the sample used is representative.
11. In 14 cases, the Web Sites for companies could not be downloaded on the day of release of the annual report as a result of the site being technically unavailable or the authors being indisposed due to unforeseen circumstances. Downloading was undertaken at the earliest

opportunity. Only two sites could not be accessed within 7 days of the release of the annual report. The two companies maintaining these sites were subsequently omitted from the analysis.

12. It is important to acknowledge that many companies supplied a copy of their annual reports on their corresponding Web Sites. To avoid double counting, the quantity of corporate social disclosure on an Internet site was measured so as to exclude sections clearly identifiable as a digital reproduction of the printed annual report.
13. This study was predominantly concerned with voluntary corporate social disclosures. Accounting standards, stock exchange listing rules and other relevant regulatory statutes were examined from the four nations to determine any mandatory corporate social disclosures. Items subsequently identified were then removed from the measurement instrument used in this study so as to ensure that only voluntary disclosures were considered.
14. Initial pretesting involved distribution of the instrument to numerous academics, practicing accountants, professional bodies and users across the Asia-Pacific. The instrument was then tested using 1995 annual reports.
15. Ranking was also done with consideration to the number of times each topic was discussed. Results using this approach were identical to rankings according to the amount of sentences (space).
16. Despite companies being publicly listed, the less than 100% response rate may be due to request letters not reaching the organizations due to inaccurate addresses or firms simply decided to ignore the request as they preferred not to incur the postage costs or failed to see the relevance of the study.
17. Zeghal and Ahmed (1990) examined only that information released in print media such as annual reports, brochures and advertisements.

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# Implementing the EU Accounting Directives in Sweden — Practitioners' Views

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**Key Words:** Tax–accounting link; True and fair override; Sweden; International accounting

***Abstract:*** *Sweden legislated in 1995 to implement the European Union (EU) directives relating to harmonization of accounting. This article reports the results of an empirical study, based upon interviews and a questionnaire survey, on the attitudes of Swedish practitioners to the harmonizing legislation and to the current state of Swedish accounting. The research finds that the Germanic influence on Swedish accounting is lessening in importance, with a likely weakening of the close link between taxation and accounting and a perception amongst practitioners of the increasing importance of the International Accounting Standards Committee (IASC) and US influences.*

Sweden has a distinctive accounting tradition with, on the one hand, a system of accounting law that is primarily tax driven and, on the other hand, an accounting profession that is both sensitive and responsive to the needs of the international capital markets. In 1995, Sweden introduced legislation to implement the European Union (EU) directives on accounting harmonization.

In this paper, we:

1. Briefly consider the provision for accounting harmonization in the EU, identifying the particular significance of the overriding "true and fair view" requirement.
2. Review the tradition of accounting legislation and the accounting profession in Sweden identifying the particular importance of the controversial tax / accounting link.
3. Report on interviews with leading Swedish practitioners, conducted in 1996, on the tax–accounting link, the true and fair override, the importance of international influences upon Swedish accounting, and the general spirit in which the EU directives have been implemented. Report on a questionnaire survey of Swedish auditors attitudes to the issues discussed with leading practitioners.

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## EU HARMONIZATION

The EU Council of Ministers has approved a number of company law harmonization directives relating to accountancy. The fourth directive, adopted in 1978, laid down requirements for individual company accounts. In 1983, the seventh directive on group accounts was adopted. Some aspects of audit requirements were covered in the eighth directive, adopted in 1984.

Van Hulle (1993) noted the combination of rigidity and flexibility which was offered by the fourth directive. However, the first draft of the directive was rigid and prescriptive in tone, in the continental European tradition. The UK was particularly influential in securing revisions that involved some relaxation of the inflexibility of the proposals, and an increased range of options. The most important change was the introduction of a "true and fair view" requirement, leaving scope for considerable flexibility (Stamp, 1973). Burnett (1975) sees this as "a basic change of philosophy" which weakened the prescriptive approach of the original first draft. While responding to UK concerns, the effect has been to weaken the harmonizing role of the directive (Turley, 1983), and to create problems for other member states in its implementation (Troberg, 1992; Rivera and Socias Salvá, 1994).

The fourth directive requires:

1. that accounts should present a true and fair view;
2. that extra information in addition to that specified by law must be given if this is necessary to provide a true and fair view;
3. that, in "exceptional cases," a company should override the detailed accounting rules where this is necessary to give a true and fair view.

The "override" provision is contrary to the continental European Roman law tradition, and a number of countries, led by Germany, have refused to apply it in their national legislation.

## ACCOUNTING REGULATION IN SWEDEN

In 1928 the Municipal Income Tax Act was passed, creating the Swedish link between tax and accounting. It is not surprising that Sweden took this route, given that the first professors of accounting in Sweden were either German or educated in Germany. In 1929 an Accounting Act was passed; it is noteworthy that the tax-accounting link was formed before a basic legal accounting framework was put in place.

From the 1960s onward the influence of the leading US theorists has become stronger, particularly under the leadership of Professor Sven-Erik Johansson of the Stockholm School of Economics. Nevertheless, the tax–accounting link was preserved, and indeed reinforced, in the Companies Act of 1975 and the Accounting Act of 1976. Moreover, a number of special tax incentives introduced during the 1970s added to the impact of the tax–accounting link. Perhaps the most dramatic was a legal provision making a line of credit extended by the government to one company, Uddeholm AB, taxable, so that it had to be shown as income in the profit and loss account and as an asset in the balance sheet (Zeff and Johansson, 1984).

In the years 1990 to 1991, a major fiscal reform cut the tax rate from 52% to 30% while removing many of the special forms of tax relief that had been developed over the years. The removal of these reliefs has reduced, but not eliminated, the distorting effect of the tax–accounting link.

In 1995, a new Accounting Act was necessary to implement the EU fourth and seventh directives on accounting harmonization; this new Act continues with the tax–accounting link.

Sweden has three bodies with the power to issue accounting standards. The legal provision that empowers these bodies is that accounts should be prepared in accordance with God Redovisningssed (GRS) — Good Accounting Practice. Specific tax and accounting rules rank above GRS (Westermark, 1989). GRS arises when both of two conditions are met:

1. An accounting recommendation has been made by a recognized authoritative body.
2. The method is widely used and applied by a large and representative circle of companies.

In the last resort, it falls to the courts to adjudicate on what constitutes GRS (von Bahr, 1991).

The oldest accounting regulatory body is Föreningen Auktoriserade Revisorer (FAR), a professional body for authorized public accountants established in 1923. During the mid-1960s, FAR set up a committee to issue accounting recommendations. These recommendations tend to relate to matters of accounting principles to be followed in the published accounts, reflecting the audit focus of FAR's membership.

In 1976, a governmental body under the Ministry of Justice, Bokföringsnämnden (BFN), the Accounting Standards Board, was set up. BFN includes representatives from a range of sectors of society affected by accounting including auditors, business, the tax authorities, the stock exchange, academia, and trade unions. During the 1980s, conflict between the tax authorities and business interests within BFN came to a head over the refusal of the tax authorities to support an approach to foreign currency translation that would have resulted in lower taxation for companies with foreign operations. The chairman and chief officer of BFN resigned, and representatives of the tax authorities took their places. Apart from the issue of foreign currency translation, BFN tends to issue recommendations on the detailed application of the internal system of accounting records rather than on external financial reporting (Jönsson and Marton, 1995).

In 1989, FAR and BFN, together with the Federation of Swedish industries, joined together to promote a new body, the Redovisningsrådet (RR), the Financial Reporting Council. RR has responsibility for issuing accounting standards for public companies listed on the stock exchange, and in practice is likely to stimulate GRS so that private companies will also follow the same standards (Rundfelt, 1993). FAR's old recommendations remain in force, and BFN's role will continue to be in the field of company accounting records.

In the mid-1970s, Swedish accountants developed a mechanism to identify separately on the face of the profit and loss account the impact of special tax provisions in the

accounts. Normal accounting principles applied in the profit and loss account down to a figure of "profit before appropriations." Following this figure "appropriations" included a range of adjustments for income and expense items recorded in accordance with tax but not accounting principles. In the balance sheet, the accumulated effects of these various adjustments were recorded as untaxed reserves, shown between liabilities and equity in the balance sheet. This ingenious formulation has been commended as "a promising model for bridging the gap between domestic and international user needs" (Choi and Mueller, 1992, p. 423). RR's first standard was on group accounts. In this standard, it is provided that in the consolidated accounts the taxation based "appropriations" should not be applied, and instead deferred taxation must be provided for on a similar basis to the USA. This is compatible with the law on the tax link because, unlike individual company accounts, the consolidated accounts do not relate to a specific taxable entity.

Thus, of Sweden's three accounting regulatory bodies one, BFN, reached a crisis when it formulated its major standard on financial reporting as a result of the tax–accounting link. The most recently created body, RR, identified as its first priority a mechanism to break that link in the consolidated accounts. Debate over the tax–accounting link, therefore, is not only relevant to specific individual accounting issues but lies at the very heart of the Swedish accounting regulatory process.

In 1995, the new Accounting Act was introduced in Sweden to implement the requirements of the EU fourth and seventh directives. The first draft from the Government for this legislation would have broken the tax–accounting link, but under pressure from the tax authorities this proposal was dropped. The Act includes a requirement that the accounts should present a "true and fair view" (this is translated as "rättvisande bild" in Swedish; the adjective is broadly equivalent to "fair"), and that where compliance with the law is not adequate to achieve this objective then supplementary information should be given in the accounts.

However, contrary to the EU fourth directive the legislation does not provide for a "true and fair override" whereby in exceptional circumstances a company may depart from specific accounting rules where this is necessary to give a true and fair view. In this respect, Sweden has followed the example of Germany.

## VIEWS OF PRACTITIONERS

### The True and Fair Override

We interviewed senior practitioners in the Stockholm offices of six major accounting firms. The practitioners we spoke to were divided on the issue as to whether they would wish to see a "true and fair override" provision in the law. On the one hand, those in favor argued:

1. An override would help certain companies. An example cited is that some 10 companies currently show listed investments at market price, a practice that will not be allowed under strict historic cost rules in the new Act.
2. An override would also help companies comply with International Accounting Standards. An example is that the law does not permit foreign exchange translation gains to be taken as profit.

3. The override would be useful as a tool against creative accounting. The example of some "creative" sale and leaseback deals on real estate was mentioned.
4. As the Accounting Act becomes older, new circumstances not envisaged in the Act may arise that make an override useful. An example is the complexity of some new financial instruments.

Against this, some practitioners saw the concept of an override provision as alien to the Sweden tradition, while extra disclosure should be an adequate solution. Two practitioners felt that ambiguity in application of an override could give rise to conflict between client and auditor.

Overall, practitioners felt that the Swedish legislation had implemented the EU directives in a very narrow and prescriptive way following the German approach. They would have preferred the government to allow the full range of options and discretion permitted in the directives, as they felt had been the case in Denmark. They saw the most important influences on Swedish accountants as, in order, the International Accounting Standards Committee (IASC), the USA, and in the UK. Indeed, one practitioner observed that he read all documentation from the UK Accounting Standards Board and took this as guidance on areas not covered by accounting recommendations in Sweden.

Thus, the implementation of the EU directives in Sweden, with its emphasis on a prescriptive tax-driven accounting system in the German tradition, was a disappointment to practitioners. They felt that Sweden had taken a retrograde step towards an old-fashioned, and extremely prudent approach to accounting. For example, one practitioner remarked:

> The EU has pushed Swedish accounting towards a German approach which is a pity and old-fashioned in a number of ways.

It is striking that leading Swedish accounting practitioners, committed to international accounting harmonization, have found application of the EU directives on accounting harmonization such a negative experience.

## The Tax–Accounting Link

All the practitioners we interviewed were agreed that they would like to see the binding tax–accounting link abolished. We undertook a literature review on arguments for and against the link, and compared this with arguments identified by the practitioners.

Arguments in favor of continuing the link are:

1. The separation of the tax and financial accounts will increase the expense of compliance, a point particularly important to the smaller company. It is argued that the increased costs for most businesses would not be matched by a corresponding benefit (Gandemo, 1992). This point was conceded by five of the practitioners we interviewed; indeed, one went so far as to welcome the prospective increase in work for the accounting profession. One practitioner

questioned this cost argument, pointing out that the Swedish accounting profession had already developed the skills to cope with the separation of tax and accounting rules in the course of applying RR's standard on consolidated accounts.
2. From the point of view of the tax authorities it is convenient to base taxation on accounts which have been subject to audit. If the link is to be broken then mechanisms will have to be found to make the audited accounts provide the supporting information for tax controls (Thorell, 1989).
3. Where, as a matter of governmental policy, tax incentives are given to a company, it is seen as equitable that an equivalent charge against profit should reduce distributable reserves so that shareholders forgo the opportunity to receive dividends and thereby match the tax reserves sacrificed by the community.
4. The tax-accounting link benefits business because it keeps tax rules related to accounting principles which are based on the concept of prudence. Breaking the link would make tax law less predictable (von Bahr, 1991).
5. Without the tax-accounting link Sweden would need to develop full rules on accounting for deferred taxation, a complex topic (Hesselman and Tidström, 1991).
6. Once the tax-accounting link has been broken, and the principle of having one all-purpose set of accounts abandoned, a range of user groups may demand special purpose reports tailored to their needs (Gometz, 1987).

Arguments against the link are:

1. The link is an obstacle to good accounting practice. As a Swedish accountant explained some 30 years ago: "In Sweden we start at the top and bottom of the income statement and work toward the middle, minimising taxes along the way. Sales are determined by outside forces, the directors decide the size of the dividend, and then we determine expenses and income to fit. The larger the reported income, the more income tax, so we maximise reported expenses within the provisions of the law" (Davidson and Kohlmeier, 1966, p. 208).
2. Problems that arise when companies wish to reconcile the desire to sustain the capacity to pay dividends with the minimization of the tax liability were highlighted by one interviewee who asserted that the tax-accounting link "gets us into trouble." He explained that if a client is urged to make a provision that is not tax allowable, the need to sustain the dividend may make it necessary to boost income with a compensating accounting policy choice that involves renouncing the related tax relief and so incurring extra taxation. This problem gives rise to confrontation between auditor and client. These distortions have become a more serious problem with the spread of share ownership in Sweden in recent years, and the danger that the general public might lose confidence in the stock exchange if the development of good accounting practice is held back by tax domination (Malmström, 1985).
3. Similarly, the tax-accounting link is an obstacle to the application of International Accounting Standards (IASs) in Sweden. All six of our interviewees saw compliance with IASs as a priority both to achieve international

harmonization and to raise quality. Compliance with IASs is difficult when the tax system, designed at the national level, dominates accounting practice. As an example application of the IAS on leasing is only practical in the consolidated accounts, not in the individual company accounts where negative tax consequences would arise.

4. Swedish accountants find it difficult to explain their accounting system in other countries. One interviewee pointed out that this problem arose not only with multinational enterprises having subsidiary or fellow group companies abroad, but also for companies involved in international trade.
5. Special government tax incentives have a particularly distorting effect on the financial accounts, making them less relevant to user groups other than the tax authorities.
6. One interviewee was concerned that the current split between individual company accounts tied to the tax-accounting link and consolidated accounts where the link has been broken is conceptually unacceptable, since the whole point of a set of consolidated accounts is to show a group of companies as though it were a single entity.

However, even though the practitioners we interviewed would all prefer to see the link broken, there is a significant body of opinion in Sweden which favors retention of the link; notably the tax authorities. The even balance of argument between proponents and opponents of the tax–accounting link has been reflected in the implementation of the EU fourth and seventh directives in Swedish accounting law. The government-appointed Accounting Committee proposed that the tax–accounting link be abolished, but that a special block on payment of dividends out of the untaxed element of accounting profit be introduced. This proposal aroused opposition from a number of quarters, and so the legislation continued the tax–accounting link. A government committee is now reviewing the issue. Two of our interviewees commented that the accounting profession, which generally opposes the tax–accounting link, had been slow to make their case and lobby effectively. A government committee is now reviewing the issue, but it appears unlikely that an end to the link will be recommended.

## THE SURVEY OF PRACTITIONERS' VIEWS

A questionnaire, based on issues raised in our discussions with practitioners in large firms, was circulated to 794 Swedish auditors during 1997. Of these, 412 were "Auktoriserade Revisorer" (AUKT), qualified to undertake all company audits, and 382 were "Godkända Revisorer" (GODK), not qualified to undertake large company audits. Three hundred nineteen usable replies were received, a response rate of 40.2%, with respondent characteristics as shown in Table 1. Although four categories of firm were identified, only nine individuals identified themselves as belonging to an international firm other than the Big 6. This is a discrete category of firm (OTHINT), which could not reasonably be combined with one of the other categories, and so these responses have been excluded where data is analysed according to type of firm in the analyses which follow.

**Table 1.** Respondent Characteristics

| *Type of firm* | *BIG6* | *OTHINT* | *SWEINT* | *SWENOINT* | *Other/not given* | *Total* |
|---|---|---|---|---|---|---|
| F | 21 | 5 | 18 | 17 | 6 | 67 |
| M | 96 | 4 | 56 | 77 | 15 | 248 |
| F/M not given | 1 | – | – | 3 | – | 4 |
| Total | 118 | 9 | 74 | 97 | 21 | 319 |
| AUKT:F | 12 | 4 | 7 | 4 | – | 27 |
| AUKT:M | 76 | 2 | 31 | 27 | – | 136 |
| AUKT:F/M not given | 1 | – | – | 1 | – | 2 |
| AUKT total | 89 | 6 | 38 | 32 | – | 165 |
| GODK: F | 9 | 1 | 11 | 13 | – | 34 |
| GODK:M | 20 | 2 | 23 | 49 | – | 94 |
| GODK:F/M not given | – | – | – | 3 | – | 3 |
| | 29 | 3 | 34 | 65 | – | 131 |
| Auditor type not given | – | – | 1 | – | 22 | 23 |
| | 118 | 9 | 73 | 97 | 22 | 319 |

As well as examining the significance of the responses overall, the data has been analysed using three variables: type of firm, type of auditor qualification and sex. Type of firm is viewed as a potentially significant variable; the views on harmonization of accounting and auditing regulation of the employees or partners of those firms which operate at an international level may differ from those working in Swedish national practice. Three types of firm appear in the analysis which follows: Big 6 (BIG6), Swedish national firms with some international links (SWEINT), and Swedish national firms without any international links (SWENOINT). Type of auditor qualification is potentially significant because of the differing experiences of audit and corporate environment which they imply; AUKT are qualified to undertake all audits whereas GODK may not undertake large company audits. In respect of sex, our hypothesis is that sex differences (M and F) should not have a significant effect on perceptions by auditors; occupational socialization and the fact that Sweden is an advanced social democracy known for its advanced attitudes towards the equality of the sexes would tend to smooth out differences based on sex. (See Hofstede, 1984, where Sweden scores lowest out of 39 countries in respect of the "masculinity index"). These perceptions were reinforced by the comments of our interviewees, allowing us to formulate the following hypotheses:

**$H_1$:** Respondents working in internationally oriented firms have significantly different views on harmonization and other accounting issues from those working in firms without international contact.

**$H_2$:** Respondents who are qualified as AUKT have significantly different views on harmonization and other accounting issues from those qualified as GODK.

**Table 2.** $x^2$ in Respect of Responses to Questions on "True and Fair Override"

| | *Firm type* | *Auditor type* | *Sex* |
|---|---|---|---|
| Should Parliament have legislated for a "true and fair override?" | 3.43 | 0.02 | 0.08 |
| Can you think of circumstances in which a "true and fair override" would be used in practice? | 3.16 | 1.38 | 0.25 |

**$H_3$:** Male and female respondents do not have significantly differing views on harmonization and other accounting issues.

## The "True and Fair Override"

We asked whether respondents would have liked to see a "true and fair override" in the legislation. 60.8% of respondents replied in the negative to this question. When asked whether they could envisage circumstances in which the "true and fair override" would be used in practice, 55.9% replied in the negative. Table 2 summarizes the $x^2$ values in respect of the three variables.

The only set of responses which appear to be out of line are those for the Big 6 respondents; the majority of those responding negatively to the questions is smaller in the Big 6 than in the other firm categories. However, none of the $x^2$ values is highly significant. In summary, it appears that the mixed feelings about the value of the override, which became apparent in the course of our interviews, are also experienced in the wider community of practising auditors.

## Good Accounting Practice

Based upon interpretations of good accounting practice offered by practitioners in the interviews, we asked respondents to the questionnaire to indicate which of four options most closely agreed with their interpretation of GRS:

1. GRS is based on the pronouncement of authoritative bodies such as BFN, FAR and RR. (OP1)
2. GRS is based on the practice of a representative sample of respected companies. (OP2)
3. GRS is based on the pronouncements issued by bodies such as BFN, FAR and RR, which have been implemented by a representative sample of respected companies. (OP3)
4. Own interpretation.

Very few respondents claimed their own interpretation ($n$ = 8) and they have been excluded from the analysis which follows. The results in respect of each of the variables are shown in Table 3.

**Table 3.** Interpretations of GRS

| | | OP1 n(%) | OP2 n(%) | OP3 n(%) | $x^2$ |
|---|---|---|---|---|---|
| Firm type | BIG6 | 32 (28.6) | 8 (7.1) | 72 (64.3) | } |
| Firm type | SWEINT | 25 (36.8) | 7 (10.3) | 36 (52.9) | } 7.34 |
| Firm type | SWENOINT | 42 (45.2) | 5 (5.4) | 46 (49.4) | } |
| Auditor type | AUKT | 48 (30.4) | 15 (9.5) | 95 (60.1) | } |
| Auditor type | GODK | 56 (45.9) | 5 (4.1) | 61 (50) | } 8.54** |
| Sex | F | 26 (46.4) | 1 (1.8) | 29 (51.8) | } |
| Sex | M | 75 (33.8) | 20 (9) | 127 (57.2) | } 5.04* |

*Notes:* *Significant at $\alpha = 0.10$.
**Significant at $\alpha = 0.05$.

The majority view is that GRS is based upon the pronouncements of the standard setting bodies as implemented by a representative sample of respected companies. However, representatives of the Big 6 firms, auditors qualified to audit large companies and men are more likely to be of this view. So, although standards are clearly important, they appear, in the view of the majority, to be validated only through implementation by well known companies. This view supports our theoretical understanding of the position as set out earlier in the paper. However, it is interesting that the GODK group and women are more likely to be of the opinion that standards alone meet the GRS requirement.

## The Tax–Accounting Link

We asked two fundamental questions in respect of the binding link between tax and accounting: firstly, whether respondents consider that the binding link between tax and accounting rules should be continued ("Do you think that the binding link between tax and accounting rules should be continued?" — LINK), and secondly, whether or not the link was still likely to be in existence in 10 years time ("Do you believe that in ten years time the binding link between tax and accounting rules will still be part of Swedish law?" — LINK10). Table 4 summarizes the affirmative responses to these two questions.

A small majority would like to retain the tax–accounting link; however, further analysis shows significant differences of opinion on this point amongst the various groups. Firm type is a highly significant variable; Big 6 respondents are significantly more likely to reject the proposition that the link should be continued, and the difference between the types of auditor is also highly significant. Almost 70% of respondents do not see a future for the binding link between accounting and taxation, but again there are significant differences between the groups. Firm type is again highly significant, although the differences in opinion between types of auditor are not, in this respect, statistically significant. The variable of sex is insignificant in respect of both questions.

Respondents were asked to classify as valid, invalid or irrelevant each of the arguments for and against the tax–accounting link which were identified from literature and the interview evidence.

**Table 4.** Affirmative Responses to Questions About the Tax–Accounting Link

| | *LINK* | $x^2$ | *LINK10* | $X^2$ |
|---|---|---|---|---|
| Total respondents: (%) | 158 (54.7%) | | 86 (30.1%) | |
| Firm type: (%) | | | | |
| BIG6 | 42 (37.2%) | } | 22 (19.5%) | } |
| SWEINT | 42 (58.3%) | } 27.68*** | 27 (38.6%) | } 11.52*** |
| SWENOINT | 69 (73.4%) | } | 36 (38.7%) | } |
| Auditor type: (%) | | | | |
| AUKT | 66 (41.3%) | } | 41 (25.9%) | } |
| GODK | 90 (70.9%) | } 25.03*** | 43 (34.4%) | } 2.39 |
| Sex: (%) | | | | |
| F | 36 (61%) | } | 18 (31.6%) | } |
| M | 118 (52.4%) | } 1.38 | 67 (29.9%) | } 0.06 |

*Notes:* ***Significant at $\alpha = 0.01$.

Arguments for the link:

1. A separation will increase costs for companies (COSTS).
2. The link means that the audit supports tax administration (AUDIT).
3. When tax incentives are given it is right that dividend paying capacity is equally reduced (DIVIDEND).
4. It is good for business that tax rules follow prudent accounting principles (PRUDENCE).
5. The link avoids the need for deferred tax (DEFERRED TAX).
6. If there are separate accounts for the tax authorities and for shareholders other user groups may demand separate accounts (SEPARATE ACCOUNTS).

Arguments against the link:

1. The link prevents the development of good accounting practice (GAP).
2. The link is an obstacle to compliance with IASs (IAS).
3. The link makes it difficult to explain Swedish accounts in other countries (EXPLAIN).
4. Where special tax incentives are given, these cause particular distortion in the accounts (DISTORT).
5. The current rules lead to different accounting principles in the consolidated accounts and a company's own accounts. This inconsistency is undesirable (INCONS).

The results are analyzed in Tables 5 and 6.

There are two arguments in favor of retaining the link between tax and accounting which are accepted by a majority of respondents: almost 60% find valid the argument that prudent tax–accounting principles are good for accounting, and just over half consider the cost argument to be valid. Table 5 shows $x^2$ values in respect of the three sets of variables: statistically significant differences arise in four out of six instances in respect of the

**Table 5.** Arguments in Favor of Retaining the Tax–Accounting Link

| *Argument* | | *Total (%)* | *BIG6 (%)* | *SWEINT (%)* | *SWENO-INT(%)* | $x^2$ | *AUKT (%)* | *GODK (%)* | $x^2$ | *F* | *M* | $x^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Costs | Valid | 144 (51.4) | 50 (43.9) | 37 (51.4) | 57 (60.7) | | 69 (43.7) | 78 (60.5) | | 32 (54.2) | 111 (49.1) | |
| | Invalid | 77 (27.5) | 43 (37.7) | 15 (20.8) | 19 (20.2) | 12.21** | 54 (34.2) | 24 (18.6) | 10.3*** | 17 (28.8) | 62 (27.4) | 1.17 |
| | Irrelevant | 59 (21.1) | 21 (18.4) | 20 (27.8) | 18 (19.1) | | 35 (22.1) | 27 (20.9) | | 10 (17) | 53 (23.5) | |
| Audit | Valid | 134 (47.5) | 47 (40.5) | 37 (52.1) | 50 (52.6) | | 71 (44.4) | 63 (48.8) | | 23 (38.3) | 109 (48.2) | |
| | Invalid | 77 (27.3) | 38 (32.8) | 16 (22.5) | 23 (24.2) | 4.49 | 45 (28.1) | 36 (27.9) | 0.81 | 18 (30) | 64 (28.3) | 2.32 |
| | Irrelevant | 71 (25.2) | 31 (26.7) | 18 (25.4) | 22 (23.2) | | 44 (27.5) | 30 (23.3) | | 19 (31.7) | 53 (23.5) | |
| Dividend | Valid | 115 (41.4) | 43 (38.1) | 28 (39.4) | 44 (46.8) | | 58 (36.7) | 59 (46.5) | | 32 (53.3) | 82 (37) | |
| | Invalid | 107 (38.5) | 47 (41.6) | 26 (36.6) | 34 (36.2) | 2.48 | 65 (41.1) | 47 (37) | 3.07 | 19 (31.7) | 92 (41.4) | 5.31* |
| | Irrelevant | 56 (20.1) | 23 (20.3) | 17 (24) | 16 (17) | | 35 (22.2) | 21 (16.5) | | 9 (15) | 48 (21.6) | |
| Prudence | Valid | 167 (59.6) | 54 (47.4) | 44 (62) | 69 (72.6) | | 87 (54) | 82 (65.1) | | 30 (50.9) | 137 (60.9) | |
| | Invalid | 52 (18.6) | 25 (21.9) | 12 (16.9) | 15 (15.8) | 15.54*** | 36 (22.4) | 20 (15.9) | 3.67 | 10 (16.9) | 45 (20) | 4.7* |
| | Irrelevant | 61 (21.8) | 35 (30.7) | 15 (21.1) | 11 (11.6) | | 38 (23.6) | 24 (19) | | 19 (32.2) | 43 (19.1) | |
| Deferred tax | Valid | 125 (44.6) | 41 (36.3) | 33 (45.8) | 51 (53.7) | | 71 (44.4) | 57 (44.9) | | 28 (46.7) | 99 (44.2) | |
| | Invalid | 98 (35) | 41 (36.3) | 24 (33.3) | 33 (34.7) | 10.03** | 56 (35) | 44 (34.6) | 0.01 | 17 (28.3) | 80 (35.7) | 1.36 |
| | Irrelevant | 57 (20.4) | 31 (27.4) | 15 (20.9) | 11 (11.6) | | 33 (20.6) | 26 (20.5) | | 15 (25) | 45 (20.1) | |
| Separate accounts | Valid | 82 (29.1) | 16 (13.9) | 22 (31) | 44 (46.3) | | 36 (22.4) | 48 (37.8) | | 25 (41.7) | 59 (26.2) | |
| | Invalid | 112 (39.9) | 52 (45.2) | 28 (39.4) | 32 (33.7) | 27.94*** | 68 (42.2) | 47 (37) | 8.68** | 16 (26.7) | 96 (42.7) | 6.92* |
| | Irrelevant | 87 (31) | 47 (40.9) | 21 (29.6) | 19 (20) | | 57 (35.4) | 32 (25.2) | | 19 (31.6) | 70 (31.1) | |

*Notes:* *Significant at $\alpha = 0.10$
**Significant at $\alpha = 0.05$
***Significant at $\alpha = 0.01$

**Table 6.** Arguments Against Retaining the Tax–Accounting Link

| *Argument* | | *Total* (%) | *BIG6* (%) | *SWEINT* (%) | *SWENOINT* (%) | $x^2$ | *AUKT* (%) | *GODK* (%) | $x^2$ | *F* | *M* | $x^2$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GAP | Valid | 156 (60.9) | 87 (75) | 28 (65.1) | 41 (42.3) | | 113 (69.3) | 59 (46.1) | | 28 (46.7) | 142 (62.3) | |
| | Invalid | 75 (29.3) | 22 (19) | 7 (16.3) | 46 (47.4) | 32.15*** | 37 (22.7) | 58 (45.3) | 17.81*** | 22 (36.7) | 72 (31.6) | 8.65** |
| | Irrelevant | 25 (9.8) | 7 (6) | 8 (18.6) | 10 (10.3) | | 13 (8) | 11 (8.6) | | 10 (16.6) | 14 (6.1) | |
| IAS | Valid | 182 (69.5) | 86 (80.4) | 47 (70.1) | 49 (55.7) | | 117 (76) | 73 (62.4) | | 37 (64.9) | 151 (72.3) | |
| | Invalid | 48 (18.3) | 10 (9.3) | 15 (22.4) | 23 (26.1) | 16.62*** | 23 (14.9) | 26 (22.2) | 5.93* | 11 (19.3) | 36 (17.2) | 1.51 |
| | Irrelevant | 32 (12.2) | 11 (10.3) | 5 (7.5) | 16 (18.2) | | 14 (9.1) | 18 (15.4) | | 9 (15.8) | 22 (10.5) | |
| EXPLAIN | Valid | 211 (75.1) | 95 (82.6) | 55 (77.5) | 61 (64.2) | | 134 (82.7) | 86 (68.2) | | 48 (78.7) | 170 (75.9) | |
| | Invalid | 43 (15.3) | 8 (7) | 12 (16.9) | 23 (24.2) | 14.33*** | 19 (11.7) | 23 (18.3) | 8.96** | 7 (11.5) | 34 (15.2) | 0.54 |
| | Irrelevant | 27 (9.6) | 12 (10.4) | 4 (5.6) | 11 (11.6) | | 9 (5.6) | 17 (13.5) | | 6 (9.8) | 20 (8.9) | |
| DISTORT | Valid | 156 (55.7) | 64 (57.1) | 37 (51.3) | 55 (57.3) | | 95 (59) | 66 (52) | | 26 (44.8) | 135 (59.7) | |
| | Invalid | 87 (31.1) | 31 (27.7) | 22 (30.6) | 34 (35.4) | 5.48 | 41 (25.5) | 48 (37.8) | 5.63* | 21 (36.2) | 65 (28.8) | 4.63* |
| | Irrelevant | 37 (13.2) | 17 (15.2) | 13 (18.1) | 7 (7.3) | | 25 (15.5) | 13 (10.2) | | 11 (19) | 26 (11.5) | |
| INCONS | Valid | 200 (71.2) | 93 (80.9) | 49 (69) | 58 (61.1) | | 122 (75.8) | 85 (66.9) | | 39 (63.9) | 164 (73.2) | |
| | Invalid | 51 (18.1) | 12 (10.4) | 12 (16.9) | 27 (28.4) | 13.48*** | 23 (14.3) | 26 (20.5) | 2.82 | 10 (16.4) | 39 (17.4) | 5.00* |
| | Irrelevant | 30 (10.7) | 10 (8.7) | 10 (14.1) | 10 (10.5) | | 16 (9.9) | 16 (12.6) | | 12 (19.7) | 21 (9.4) | |

*Notes:* *Significant at $\alpha = 0.10$
**Significant at $\alpha = 0.05$
***Significant at $\alpha = 0.01$

**Table 7.** International Influences on Swedish Accounting (NB Maximum Score = 3; Minimum Score = 0)

| | *IASC* | *Germany* | *UK* | *US* |
|---|---|---|---|---|
| Total respondents | | | | |
| Average (standard deviation) | 2.21 (0.77) | 1.52 (0.84) | 1.65 (0.78) | 2.04 (0.82) |
| Ranking in importance | 1 | 4 | 3 | 2 |
| Firm type average (standard deviation) | | | | |
| BIG6 | 2.47 (0.66) | 1.38 (0.8) | 1.76 (0.7) | 2.25 (0.71) |
| SWEINT | 2.22 (0.71) | 1.54 (0.8) | 1.74 (0.77) | 2.01 (0.8) |
| SWENOINT | 1.85 (0.81) | 1.67 (0.9) | 1.45 (0.88) | 1.79 (0.95) |
| *F* values | 18.04*** | 2.88 | 4.3** | 7.68** |
| Auditor type average (standard deviation) | | | | |
| AUKT | 2.43 (0.63) | 1.45 (0.82) | 1.74 (0.73) | 2.18 (0.74) |
| GODK | 1.91 (0.84) | 1.61 (0.86) | 1.55 (0.85) | 1.86 (0.91) |
| *t* values | 5.78*** | −1.56 | 1.99** | 3.17*** |
| Sex average (standard deviation) | | | | |
| F | 2.3 (0.67) | 1.5 (0.88) | 1.63 (0.83) | 1.95 (0.8) |
| M | 2.2 (0.79) | 1.52 (0.83) | 1.66 (0.78) | 2.07 (0.83) |
| *t* values | 0.91 | −0.18 | −0.22 | −0.99 |

*Notes:* **Significant at $\alpha = 0.05$.
***Significant at $\alpha = 0.01$.

different types of firm, two out of six in respect of different auditor qualifications and three out of six in respect of sex.

All of the arguments against the retention of the link are accepted by a majority of respondents, and, as for the arguments in favor, some striking differences arise upon examination of the variables. In four out of the five arguments, respondents from the Big 6 and, to a lesser extent, those from Swedish firms with international links, are much more likely to find the arguments valid. Significant differences between the auditor groups are found in respect of four of the arguments, and between the sexes in the case of three of the arguments.

## International Influences on Swedish Accounting

The questionnaire presented respondents with a list of eight possible international influences, and asked the question: "How important do you think that each of the following bodies or countries are as an influence on accounting in Sweden?" requesting respondents to indicate one of four possibilities: no importance; little importance; important or very important. By scoring each possibility from 0 (no importance) to 3 (very important), it is possible to rank the influences in order of importance and also to calculate averages by variable for comparative purposes. The International Accounting Standards Committee (IASC), the US, the UK and Germany were rated as the most important by respondents. Overall mean scores for France (0.88), Canada (0.61), Australia (0.48) and Japan (0.43) show that the accounting in these four countries has very little influence, and no further analysis is presented. Results in respect of the four highest scoring influences are analysed in Table 7 which shows *F* values in respect of the ANOVA test on average scores from the different

**Table 8.** Summary of Tests of Significance by Variable

| *Question* | *Ref. to Table* | *Firm type* | *Auditor type* | *Sex* |
|---|---|---|---|---|
| Opinion on true and fair override | 2 | ns | ns | ns |
| True and fair override in practice | 2 | ns | ns | ns |
| God Redovisning Sed | 3 | ns | * | ** |
| Tax accounting link | 4 | *** | *** | ns |
| Tax accounting link in 10 years | 4 | *** | ns | ns |
| In favour of retaining link: | | | | |
| Argument 1 COSTS | 5 | ** | *** | ns |
| Argument 2 AUDIT | 5 | ns | ns | ns |
| Argument 3 DIVIDEND | 5 | ns | ns | * |
| Argument 4 PRUDENCE | 5 | *** | ns | * |
| Argument 5 DEFERRED TAX | 5 | ** | ns | ns |
| Argument 6 SEPARATE ACCOUNTS | 5 | *** | ** | * |
| Against retaining link: | | | | |
| Argument 1 GAP | 6 | *** | *** | ** |
| Argument 2 IAS | 6 | *** | * | ns |
| Argument 3 EXPLAIN | 6 | *** | ** | ns |
| Argument 4 DISTORT | 6 | ns | * | * |
| Argument 5 INCONS | 6 | *** | ns | * |
| Influences: | | | | |
| IASC | 7 | *** | *** | ns |
| Germany | 7 | ns | ns | ns |
| UK | 7 | ** | ** | ns |
| US | 7 | ** | *** | ns |

*Notes:* ns — Not significant.
*Significant at $\alpha = 0.10$.
**Significant at $\alpha = 0.05$.
***Significant at $\alpha = 0.01$.

types of firm, and *t* values in respect of group *t* tests on average scores by auditor type and sex.

Significant differences in the relative importance to different groups of the various influences emerge upon disaggregation of the results. Respondents in firms without international affiliations place a greater emphasis upon the importance of German influence than other groups. Big 6 respondents rate the influences of the IASC and the US much more highly than the other groups. The same points can be made in respect of the two auditor type groups: those qualified to undertake large company audits are more likely to rate highly IASC and US influence, whilst GODK rank the German influence, rather than the British, in third place. There are no significant differences by sex.

However, the analysis of the results of this part of the survey should be treated with some degree of caution because of their reliance upon treating ordinal data as interval data.

## SUMMARY OF THE ANALYSIS OF THE QUESTIONNAIRE RESULTS

A range of significant differences have been identified in the analysis of the questionnaire data. These are summarized in Table 8.

In total, tests of significance have been carried out in respect of 20 questions. Thirteen out of the 20 sets of answers show significant differences when the responses are analyzed by the variable of type of firm, leading to the conclusion that: ($H_1$) respondents working in internationally oriented firms have significantly different views on harmonization and other accounting issues from those working in firms without international contact, although not in all cases. Eleven out of the 20 sets of answers show significant differences when the responses are analysed by the variable of auditor type, leading to the conclusion that: ($H_2$) respondents who are qualified as AUKT have significantly different views on harmonization and other accounting issues from those qualified as GODK, although not in all cases. In respect of 7 out of 20 sets of answers, there are significant differences when the responses are analyzed by the sex of the respondents. So, although it generally holds good that ($H_3$) male and female respondents do not have significantly differing views on harmonization and other accounting issues, there are some exceptions. It is beyond the scope of this paper to examine these exceptions in detail, but the issues are covered in Blake et al. (1998).

## CONCLUSION

In this article, we have examined some of the salient issues which have arisen because of the implementation of accounting legislation in Sweden to comply with the European directives.

The "true and fair override" is a requirement of the fourth directive which, following the example of Germany, has not been brought into Swedish law. Our discussions with practitioners identified several aspects of the "override" which they would find useful in practice. However, a majority of respondents to the questionnaire survey would not have welcomed its inclusion in Swedish legislation. We conclude that there is substantial support, especially amongst practitioners working in firms without international links, for the view that the "override" is an alien element, viewed in the context of the Swedish accounting tradition.

A very important element of Swedish accounting is the close link, modelled upon the German traditional approach to accounting, between taxation and accounting. Underlying the debate on the tax–accounting link there is a range of issues, on the one hand, of fiscal and public policy in support of the link, and, on the other, of how to achieve full and fair financial reporting for a range of international and domestic users. The practitioners interviewed, all from large international firms, would like to see the link broken; however, by contrast, a small majority of the survey respondents would like to see the link retained. Despite this support for the link, however, the majority do not expect it still to exist in 10 years time, a finding which suggests that many practitioners do not expect their more traditional view to be a significant factor in determining the development of Swedish accounting.

Although the history of accounting and current accounting legislation in Sweden owe much to the example provided by Germany, we find that our survey respondents do not rate the German influence to be as important on current Swedish accounting as that of the IASC and the US, and even, in some cases, the UK. We conclude that there is a definite weakening of the German influence on Swedish accounting.

The type of firm for which auditors work, and the type of qualification they possess, are significant factors in determining their opinions. Those in large international firms are evenly divided on the "true and fair override" issue, oppose the link between taxation and accounting, and see the IASC, the US and the UK as the three most significant accounting influences. Practitioners in national firms support the exclusion from legislation of the "true and fair override," support the tax–accounting link and see Germany, as well as the IASC and the US, as a relatively significant accounting influence. If practitioners in the large firms, with international experience, as is likely to be the case, are more influential in determining the future direction of Swedish accounting, then development towards an Anglo–American model of accounting seems likely to occur.

The issues examined in this article in relation to harmonization of legislation in Sweden will continue to be highly relevant, as the EU expands further. Most, if not all, of the further expansion is likely to encompass countries which, like Sweden, will have to reconcile the need for information supply to capital markets with a Germanic accounting tradition which emphasizes the primacy of taxation as the purpose of accounting statements. The high relative importance accorded to International Accounting Standards by Swedish practitioners, is, in our opinion, indicative of the direction in which change is likely to take place in the accounting traditions of substantial parts of Europe.

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# Governmental Accounting and Auditing in Thailand: An Overview and Some Suggestions for Improvement

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**Key Words:** Thailand government accounting; Thailand government auditing; Thailand performance auditing

***Abstract:*** *The purpose of national government is to deliver services to its constituents that often do not give rise to revenue. Frequently, governments make such resource allocation decisions with poor quality financial information that is not reliable, not timely, and limited in its data on assets and liabilities. One such government is Thailand, which in May 1997 experienced an economic crisis that required the intervention of the International Monetary Fund, toppled the existing government, and contracted the Thai economy. Thus, the Thai government faces an increasing need for improved government financial information for planning for an economic recovery. This paper will present the current state of governmental accounting and auditing in Thailand. Further, the author will make some suggestions for improving the reporting and auditing of financial information to facilitate government decision making with the existing economic crisis.*

The purpose of national government is to deliver services to its constituents that often do not give rise to revenue. It is generally the responsibility of the executive function to manage the government's resources and financial affairs, while the legislative function authorizes the acquisition and use of financial resources. To be successful in these tasks, government needs to report useful financial information for utilization by the legislature, the executive branch, the public, investors and creditors, other governments and international entities, and economic and financial analysts. This information may be used to assess a government's stewardship of resources, government's compliance with legal mandates, the state of government finances (which include sources and types of revenues, uses of resources, and timing and amounts of cash flows), government performance of services in an economical and efficient manner,[1] and the overall economic impact of government policies (Public Sector Committee, 1991).

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National governments may prepare financial information under three systems: general purpose financial statements, national accounts under the System of National Accounts (SNA), and Government Finance Statistics (GFS) under the International Monetary Fund (IMF) Framework. SNA measures national income and net worth for a variety of economic sectors and is used to make international comparisons while GFS provides a fiscal analysis of the general government sector only (Public Sector Committee, 1998).

No matter which systems are utilized, frequently, governments are managed with poor quality financial information that is not reliable, not timely, or limited in its data on assets and liabilities (Public Sector Committee, 1998). One such government is that of Thailand, a small country of 60 million people in southeast Asia. Thailand has been rapidly changing socially, economically, and politically for the past 20 years under numerous coalition governments (Governmental Accounting, 1991). In May 1997, speculation in Thai currency, the baht, drove the country into an economic crisis that required the intervention of the IMF, toppled the existing government, and contracted the Thai economy (Warner, 1997b; Einhorn, 1998). Now, the Thai government faces an increasing need for accountability to its people and its investors, as well as to its creditors, other governments, and international agencies for the strategies it pursues during the economic recovery.

This paper will present the current state of governmental accounting and auditing in Thailand. Further, the author will make some suggestions for improving the reporting and auditing of government financial information to facilitate government decision making with the existing economic crisis.

## GOVERNMENTAL ACCOUNTING IN THAILAND

### Government Organizational Structure

Thailand has existed as a state for over 800 years. The management of national revenues in Thailand began in the 15th century with the establishment of the Royal Treasury Department. The concept of governmental accounting with formalized protocols for collections, disbursements, levies and audits was introduced in 1879 by King Chulalongkorn. It was in the Chulalongkorn era that Thailand opened itself to western civilization and the concept of "State Accounting" became a necessity. The "Revenue Office" was established to collect taxes and other revenues, and also, to report the position of the royal finances and the Royal Treasury (www.mahidol.ac.th/Thailand/governm-politic/politics.html, 1997).

In 1932, Thailand established a Constitutional monarchy. Figure 1 depicts Thailand's current government organization into three branches of government under the Monarch (www.mahidol.ac.th/Thailand/governm-politic/politics.html, 1997). Entities appearing in bold type in the figure are directly involved in government budgeting, accounting and auditing. Budget approval rests with the National Assembly (Parliament) while actual accounting and auditing issues fall within the jurisdiction of the executive branch, but not within one ministry (www.thaigov.go.th/thaiorg.htm, 1997; www2.mof.go.th/mofweb/history/index.html, 1997).

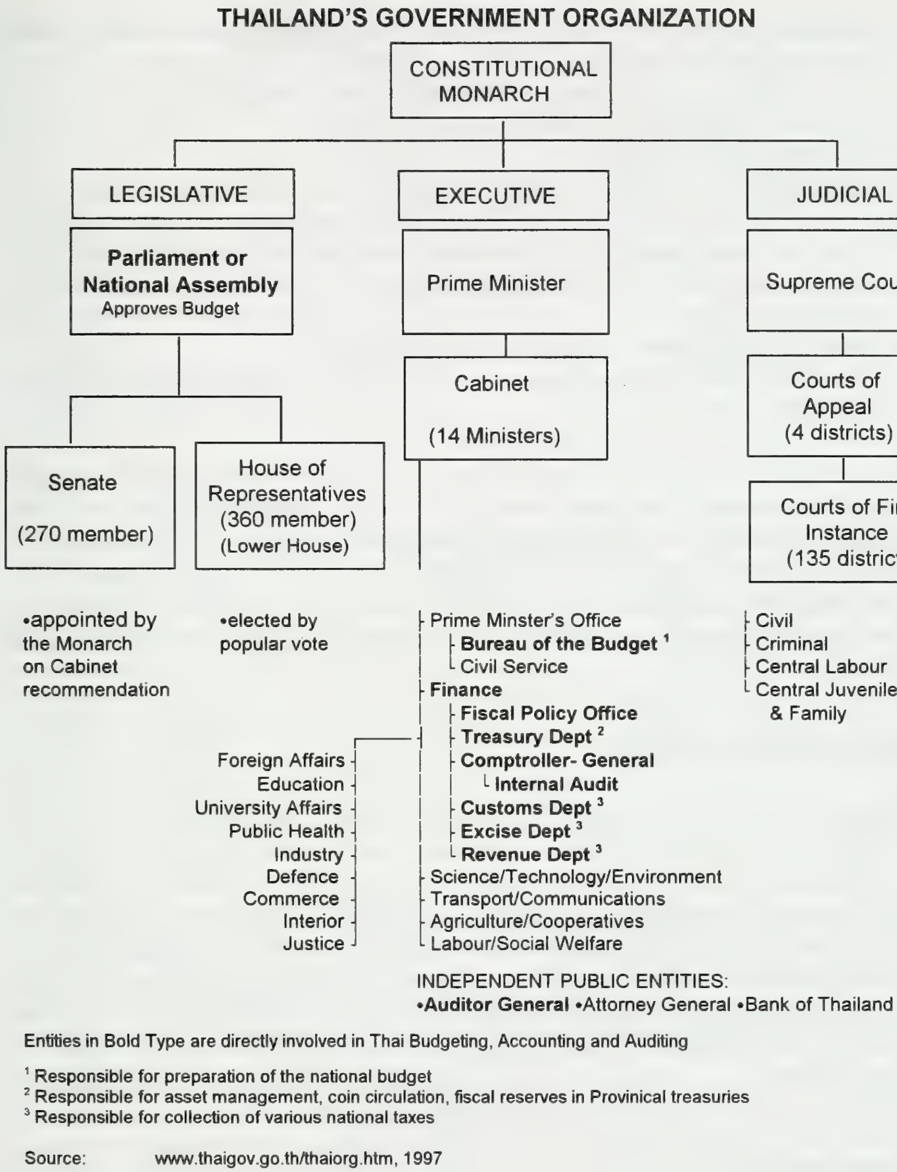


**Figure 1.** Thailand's Government Organization

The Comptroller General's Department has the central role in governmental accounting. The Comptroller General is responsible for accounting, budgetary administration, internal auditing, and financial policy formulation. Specific duties of the Department include:

1. implement rules, regulations, and guidelines on government budgets, as well as carry out internal auditing in the government

2. evaluate performance in financial and budgetary implementation of the governmental agencies
3. monitor budgetary disbursements and other related activities
4. administer government cash reserves and borrowing
5. keep the state accounting
6. administer salaries and pension payments in addition to carried-over budgets
7. oversee the operation of state enterprises with government ownership greater than 50%, and other entities with government ownership less than 50%
8. development of government personnel working in areas related to the Department's authority
9. enhance the Department's operation in regional areas
10. carry out other duties and tasks as assigned (www2.mof.go.th/mofweb/history/index.html, 1997)

It can be noted that in duties one and two, the Comptroller General's Department performs a role similar to the United States (US) General Accounting Office (GAO) and in duties three through six, the Department performs a role similar to that of the US Treasury Department (Mosher, 1979; US GAO, 1994; Dittenhofer, 1996; Trask, 1996; www.gao.gov, 1998). This similarity can be traced to the active effort of Thailand to duplicate the governmental accounting system used in the US (Governmental Accounting, 1991).

## Reporting Entity and Administration

Thailand uses only a centralized, national government accounting and reporting system with no need for the state and local government reporting systems seen in the US. Thailand has a single government with two levels of administration: central and local. The central administration is composed of ministries, sub-ministries, departments, and government offices. The local administration is composed of agencies of the Provincial Administration and of the Local Administration administered by officers of the central administration and reporting directly to the central administration (Akepaopum, 1995). See Table 1 for a summary of the responsibilities of the two levels of Thai administration.

## Accounting Policies

### *Revenues*

Each unit of the local administration is responsible for collecting and transferring their revenues to the 76 provincial treasuries, which then transfer the monies to the Comptroller General's Department. The governmental units of the central administration are also responsible for collecting and transferring revenues to the Comptroller General's Department, however, they do not utilize the provincial treasuries (Akepaopum, 1995).

**Table 1.** Responsibilities of Thailand's Two Levels of Administration

| *Level of administration* | *Central* | *Local* |
|---|---|---|
| Agencies included | Ministries | Regional administration |
| | Sub-ministries | Provincial administration |
| | Government offices | Local administration |
| | Government departments | |
| Revenue collection | | |
| Deposited to | Government unit | Provincial treasuries (76) |
| Transferred to | Comptroller General Office | Comptroller General Office |
| Disbursements | | |
| Funds from | Comptroller General Office | Provincial treasuries |
| Paid by | Government unit | Local administration |

*Source:* Governmental Accounting (1991).

### *Disbursements*

All governmental agencies must have an approved budget before the beginning of the fiscal year on October 1 to incur any expenditures in that fiscal year. Expenditures must conform to the budgetary authority granted by the National Assembly for cash disbursement to occur. Governmental agencies advise the Comptroller General's Department (if central administration) or the provincial treasuries (if local administration) of the need for monies for cash disbursements. The Comptroller General's Department or provincial treasuries verify the expenditure against existing documentation and the budget, and then transfer monies to the government unit for disbursement to the vendor (Akepaopum, 1995).

### *Recording Financial Transactions*

Thailand uses cash basis reporting with governmental units recording cash receipts and disbursements manually in registers and ledgers in the fiscal year they are received or disbursed. The Thai governmental accounting system uses budgetary accounting for control, a national chart of accounts, and a single, national general fund (Akepaopum, 1995).

Each unit may have additional fund accounts as established by law. For example, the Ministry of Education may provide support for schools in a regional area and the Ministry of Public Health may supply support for the hospital in the area. The regional governmental units will maintain funds to receive these revenues directly from the central ministry or as collected on behalf of the central ministry and make disbursements in the name of the central ministry. The regional unit will manage these funds without a direct budget from the Parliament, as the central ministry's budget gives them the authority to collect revenues and make expenditures at the local level. These procedures allow the regional unit to avoid the transfers to and from the Comptroller General's Department. These funds are periodically examined by the Office of the Auditor General (Akepaopum, 1995).

The manual nature of the accounting system, and local, provincial and national administration of receipts and disbursements makes the accounting process extremely slow. Legally, annual appropriations must be approved by the National Assembly and

spent in the approved fiscal year with no carryover of the remaining appropriation. Since Thailand has the problem of a manual, therefore, time consuming accounting process for disbursements, regulations allow the government a period of 2 years to pay expenditures from an approved appropriation. These costs appear in a cash basis system in the fiscal year in which they are paid (Governmental Accounting, 1991). Thus, the Thai government finds it extremely difficult to get a true understanding of the costs of services provided to the public.

Fixed assets and long-term liabilities do not appear in separate funds or account groups. No depreciation is recorded. As Thailand uses cash basis reporting, cash disbursed to acquire fixed assets or pay liabilities and interest appears as an expenditure in the general fund when paid. Expenditures for fixed assets or to pay long-term liabilities are not assigned to separate government projects and programs, but are recorded in total for the "State" national accounting by the Comptroller General's Department. Cash received for fixed asset disposal or from loans appears as revenue in the general fund when received. When Thailand periodically borrows money to subsidize budgetary deficits, these amounts are recognized as revenue in the budgetary process (Governmental Accounting, 1991).

### *Reporting*

Reporting is performed at two levels: "State" or national accounting and governmental unit accounting. Table 2 presents a comparison of the two levels of Thai reporting and also shows a comparison of Thai "State" accounting to that of the US federal government. State accounting provides accounting information at the macro level. The Comptroller General's Department prepares the national financial statements which include the Statement of Receipts and Payments, Statement of Financial Status, Currency Reserve Account and Notes to the Financial Statements. The Office of the Auditor General audits and endorses these national financial statements (Akepaopum, 1995).

Governmental unit accounting provides control over financial resources received by or distributed by each unit. The units do not prepare financial statements or gather managerial information for decision making, but simply maintain balances in general ledgers. The Office of the Auditor General examines these accounts without endorsement (Akepaopum, 1995).

Thailand's Civil Service System (CSC) is responsible for oversight of the personnel operation of the Comptroller General's Department, the Office of the Auditor General, and the provincial, municipal and district governments. The CSC uses categories and steps similar in nature to the US Office of Personnel Management's grades and steps. The majority of the Comptroller General's staff, performing the national accounting, are under the two categories general positions, and professional and special positions. The provincial, municipal, and district government clerical staff, performing the state accounting, generally are in the category of general positions. General positions are secured by scoring well on competitive entrance exams given by the particular agency or locality in need of personnel. The professional and special positions require a bachelor's degree and successful completion of a selective exam based on technical knowledge. All personnel receive basic clerical training by the CSC (Riggs, 1966; Siffin, 1966; Haas, 1979; www.infonews.co.th/CSC/system/sys_e.htm, 1998).

**Table 2.** Reporting and Auditing at Two Levels of Thai Governmental Accounting

| | *Thai "State" Accounting (National)* | *US Federal Government Accounting* | *Thai Governmental Unit Accounting* |
|---|---|---|---|
| Information preparer | Comptroller General's Office | US Department of the Treasury | Governmental Units |
| Basic financial reporting | 1. Statement of Receipts and Payments<br>2. Statement of Financial Status<br>3. Currency reserve account<br>4. Notes | 1. Statement of Financial Position<br>2. Statement of Operations<br>3. Statement of Cash Flows<br>4. Notes | 1. Balances of General Ledgers<br>2. General Details of the Balances |
| Reports presented to | Prime Minister and Parliament | President and Congress | Head of Government Unit |
| Auditor | Office of the Auditor General | US Goverment Accounting Office | Office of the Auditor General |
| Auditor responsibility | Audit and endorse financial statements | Audit and endorse financial statements | Examine the balances without endorsement |

*Sources:* Governmental Accounting (1991), US Office of Management and Budget (1993) and www.gao.gov/about.gao/about.gao.htm (1998).

### *Budgeting*

In the past decade, Thailand changed its budgetary system from Line Item budgeting to a Planning–Programming–Budgeting–System (PPBS) (Governmental Accounting, 1991). Such a system requires the government to identify its major goals and program objectives then analyze existing and proposed programs' costs and benefits, and their ability to contribute to the achievement of these goals. PPBS requires the measurement of productivity (the relation between costs and outputs), and of effectiveness (the relation between the program and its effect on the public) (Tudor, 1972). In light of the previous discussion of cash basis accounting and manual transaction recording, it appears that the use of PPBS by Thailand is rudimentary at best.

## GOVERNMENTAL AUDITING IN THAILAND

### Organizational Structure

The first "Audit Office" was established in 1875 by King Chulalongkorn to audit the Royal Treasury Department. The current Office of Auditor General was established in 1979 when the National Assembly enacted the State Audit Act, B.E. 2522. The Office is an independent public agency reporting directly to the Prime Minister. To foster the appearance of independence, the Auditor-General is appointed by the Cabinet and is confirmed by the Parliament (State Audit Act, 1979).

The State Audit Act, B.E. 2522 details the authority and responsibilities of the Office of Auditor General. These responsibilities are:

1. To audit the Statement of Receipts and Payments, and the Statement of Financial Status of each fiscal year and to give an opinion whether they are in compliance with the law and are correct.
2. To audit the Currency Reserve Account each year and to give an opinion whether it is in compliance with the law and is correct.
3. To audit the receipts and payments, the custody and disbursement of money, and the use of other properties belonging to or being the responsibility of the audited agency, and to give an opinion whether they are in compliance with the laws, rules, regulations or resolutions of the Council of Ministers; and to examine the disbursement of money and use of other properties, and to give an opinion whether they are done economically and efficiently. In the case where an audited agency is a state enterprise, such opinion shall be given with due consideration of the generally accepted auditing standards.
4. To examine issues in connection with the collection of taxes, fees and other incomes of the audited agencies and to give an opinion whether they are in compliance with the laws, rules, regulations or resolutions of the Council of Ministers (Governmental Accounting, 1991).

In the State Audit Act, B.E. 2522, the audited agency includes "a Ministry, Sub-ministry, Department or other government office called by another name; an agency of the Provincial Administration; an agency of the Local Administration; a state enterprise under the law on budgetary procedure, or other state agency; and any other agency which is required by law or that the Prime Minister has ordered that the audit there be conducted by the Office of Auditor General (State Audit Act, 1979)."

To perform these responsibilities, the State Audit Act, B.E. 2522 also grants the Office of Auditor General the authority to:

- to examine money and other properties, accounts, registers, documents or other evidences which are the responsibility of an audited agency
- to summon an audited officer or official of an audited agency for inquiry or to order an audited officer or official of an audited agency to deliver all accounts, registers, documents or other evidences made by or are in the possession of an audited agency
- to attach money and other properties, accounts, registers, documents or other evidences which are the responsibility of an audited agency
- to summon a person to testify as witness in the examination or to deliver any account, register, document or other evidence concerned or presumed to be concerned with an audited agency to supplement its consideration (Governmental Accounting, 1991).

In 1995, the Office of Auditor General had approximately 2,500 employees responsible for auditing more than 57,000 agencies throughout the country, as well as Thailand's governmental units in other countries, such as the Royal Thai Embassies or Thai Trade Centers. With so many potential auditees, the Office of Auditor General

selects its audits using a random method. This results in numerous agencies that have not been audited for a period of time (Akepaopum, 1995).

Currently, the Auditor General's Office focus is on audit procedures concentrating on the accuracy of documents and compliance with the law, requiring a considerable amount of time to inspect documents and accounting records. Such an audit is further complicated by the lack of computer processing of accounting information, as the majority of governmental accounting is performed manually and is extremely paper intensive (Governmental Accounting, 1991).

The Office of Auditor General performs a role similar to the US GAO as Thailand actively attempted to duplicate the US government accounting and auditing system (Governmental Accounting, 1991). Unlike the Office of Auditor General, which is an independent agency of the Thai executive branch, the US GAO is under the legislative branch (Dittenhofer, 1996; Trask, 1996; www.gao.gov/about.gao/about.gao.htm, 1998).

As stated previously, the CSC is responsible for oversight of the personnel operation of the Office of the Auditor General. The majority of the Auditor General's staff are under the two categories professional and special positions, and top–middle level executive positions. These categories require a bachelor's degree or higher for entry into the positions with progress through the steps to the next class based on time in class or the securing of an advanced degree. The Office of Auditor General administers its own selective exam and only those receiving the highest test scores are considered for the positions. Initial training and continuing education are conducted by the Auditor General under the auspices of the CSC and paid foreign study is often available (Riggs, 1966; Siffin, 1966; Haas, 1979; www.infonews.co.th/CSC/system/sys_e.htm, 1998). The process and the personnel employed are somewhat similar to the US GAO. Since 1980, the GAO has recruited its own personnel from business programs in universities around the US. Generally, they seek students with high grade point averages and leadership qualities to fill initial grades of GS7 or GS9, with possible advancement through to GS18. The majority of their personnel fall in the GS11 to GS14 range. Much of their training and continuing education is performed internally (Mosher, 1984; Walker, 1986).

The US GAO began its auditing of the US government by performing "voucher audits," checking the accuracy and legality of individual transactions in great detail, much like the Office of Auditor General. With changes in US financial reporting from cash to accrual basis, the GAO audits evolved into "comprehensive audits" or "Yellow Book" audits of the financial statements or finance related reports, audits of compliance with laws and regulations, and reviews of agency performance with recommendations for improvements in government efficiency (Mosher, 1979; US GAO, 1994; Dittenhofer, 1996; Trask, 1996; www.gao.gov/about.gao/about.gao.htm, 1998).

## Reporting Policies

The Office of Auditor General procedures for reporting the results of an audit as described in the State Audit Act, B.E. 2522 include the following:

1. In the case where the results of an examination indicate that there are errors or noncompliance with the laws, rules, or regulations of the Council of Ministers, the

Office of Auditor General shall notify the audited agency to furnish an explanation or rectify the errors or correctly comply therewith within a prescribed period (generally, 60 days). If, after the prescribed period has elapsed, the audited agency does not furnish an explanation or rectify the errors, or has not correctly complied with the laws, rules, regulations or resolutions of the Council of Ministers without justification, the Office of Auditor General shall notify the relevant Ministry or the superior official or the person who controls, supervises or is responsible for the audited agency, as the case may be, of the situation.

2. In the case where the results of an examination show that there is an indication of dishonesty, the Office of Auditor General shall notify the inquiry official to institute legal proceedings. The Office of Auditor General shall also notify the relevant Ministry or the superior official or the person who controls, supervises or is responsible for the audited agency of the findings. In the event the relevant Ministry or the superior official or the person who controls, supervises or is responsible for the audited agency does not take any action to correct the dishonesty within the prescribed period, the Office of Auditor General shall report the matter to the Prime Minister.
3. The Office of Auditor General shall submit a report on the audit of the Statement of Receipts and Payments, and the Statement of Financial Status of each fiscal year (including the audit opinion) to the Prime Minister which is then forwarded to the Parliament (Governmental Accounting, 1991).

## IMPROVING THAI GOVERNMENTAL ACCOUNTING AND AUDITING

### Impetus for Change

In May 1997, foreign speculators began heavy trading in Thai currency, the baht, which was then tied to the value of the US dollar to maintain its stability and attract foreign investors. Lagging Thai exports, massive short-term foreign debt, a real estate market glut, and a high Current Account deficit made the baht an attractive target. In rapid response to the attack, Thailand bought up baht and other Asian countries (ASEAN treaty nations) raised their short-term lending rates to deny cheap funds to the raiding investors. The financial crisis soon began to impact other Asian nations (Thanatat, 1997).

By June, the Thai government had used US$32.4 billion of its reserves to prop up the baht and provide liquidity to Thailand's financial institutions, but in July, the Thai government was forced to float the baht causing its value to drop immediately from 24.45 to the US dollar to 28, driven by market forces (Sinclair, 1997; Vatikiotis, 1997). By mid September, the baht had fallen 37% from its December 1996 value (Warner, 1997a). Although the crisis was the result of private sector investment in unproductive areas not public sector borrowing, the government of Thailand aggravated the situation by delaying instituting flexible exchange rates, waiting to initiate control over private banks, and reacting slowly to the real estate crisis (Sender, 1998).

The IMF, eight central banks, the Asian Development Bank, and the World Bank combined to bail out Thailand in August with a US$17.2 billion loan. The agreement

called for Thailand to maintain foreign reserves of US$23 billion for 1997 and US$25 billion for 1998, and to publish its economic indicators at 14-day intervals instead of 30-day intervals (Sinclair, 1997; Warner, 1997b).

By September, the government had closed or merged weak finance companies, increased the Value Added Tax on non-essential items, and instituted stricter controls on private sector debt. Government spending was reduced and infrastructure improvement projects were canceled (Sinclair, 1997; The Search for Bargains, 1997).

In November 1997, a new coalition government was installed and Parliament issued decrees establishing two agencies to handle the disposal of finance companies' assets, ordering the Bank of Thailand to shorten the accrual period for non-performing loans to 6 months, and liberalizing the guidelines for foreign investment in Thai financial institutions (Warner, 1997b).

By March, 1998, the baht and the Thai stock market had stabilized, but the overall economy was contracting with higher loan interest rates impacting Thai companies, unemployment rising, and only slightly increasing exports (Einhorn, 1998). It is apparent the Thai economic recovery will be long-term.

## Change in Government Strategies

With the financial crisis of 1997, the new Prime Minister, Chuan Leekpai, and the Council of Ministers issued a policy statement in November 1997 recognizing the need for change in the administration of state affairs to alleviate the economic crisis. The statement called for more public participation in government policy making, decentralization of administrative authority to local administration, and more privatization of government enterprises. Additionally, the statement noted the importance of national budget management with a focus on maintaining international reserves, increasing foreign exchange revenues, increasing employment through skills education and expansion of tourism, and encouraging business growth through the use of production technology and improved infrastructure (www.thai.go.th/general/policy/policy.htm, 1998). Such changes require more and better information for decision making on the use of limited government resources.

## Improving Accounting and Reporting

In 1979, F.C. Mosher suggested that there are three stages to government financial management: (1) "regularity and control" which focuses on legality, accuracy of classification, and regularity of collection and disbursement; (2) "financial management" which concentrates on improved monitoring, better asset management, more realistic budgeting, and audits focused on improving efficiency and lowering costs; and (3) "strategic choice" which integrates budgeting, planning and accounting, and utilizes performance auditing to improve economy, efficiency, and effectiveness.[1] Mosher suggests the problem with many governments is that they adopt reforms in their accounting and auditing processes that are not consistent with their stage of evolution (Mosher, 1979; Dean, 1988). In the case of Thailand, the use of PPBS with a manual, cash basis accounting system does not appear to be workable.

Therefore, the budget is less than realistic for decision making and for comparisons to actual outcomes.

The Public Sector Committee (PSC) of the International Federation of Accountants recognizes Mosher's theory in its *Guideline for Governmental Financial Reporting Exposure Draft* (Public Sector Committee, 1998). The *Guideline* describes four bases of accounting and reporting for governments (cash, modified cash, modified accrual, and accrual) and notes the choice of basis depends on the characteristics and nature of the reporting entity, the purpose of reporting, and the cost of developing and maintaining an information system. As governments seek a transition from one basis to another, the *Guideline* can be useful for planning such a change (Public Sector Committee, 1998).

Thailand still utilizes a manual, cash basis reporting system indicating no progress from the "regularity and control" stage of government financial systems. Such a system requires an intensive clerical staff with little professional accounting training, and auditors review transactions to the penny. To move to the next stage of governmental accounting development, "financial management," Thailand must develop systems to manage its assets and debt, record a wider range of transaction types with more stages in the transactions (encumbrance accounting), integrate its budgeting and accounting system, and move toward performance auditing (Mosher, 1979). This will necessitate a change from cash basis to at least the modified accrual basis of accounting to recognize the majority of revenues and expenditures in the period in which they occur. For such a system to be beneficial to decision making, computerization of the accounting information system will be necessary to provide timely reporting (Public Sector Committee, 1998).

With the existing financial crisis, the Thai government has been forced to curtail spending and is limited in its ability to raise additional cash by increasing taxes without causing further economic harm (Einhorn, 1998). This means the development of a computerized government accounting system will be delayed. As a stop gap measure until such a system can be produced, Thailand can begin educating its clerical staff in professional accounting or replace this staff with individuals trained as professional accountants to provide the ability to manually record more complicated financial transactions.

In recent years, Thailand has invested large sums in fixed assets such as electric and water projects, roads, railroads, ports, and airports to facilitate international commerce (Robinson et al., 1991). At a minimum, the government accounting system should identify and record these assets and assign responsibility of these assets to the appropriate government agencies. Also, as the service potential of the assets declines, some means of identifying and recording this decline in usefulness should be performed. Further, long-term debt associated with these fixed assets must be recorded in such a way that the government is aware of future obligations and can plan for sources to fund these future expenditures. These reporting adjustments would aid in long-term planning for asset replacement and debt management (Public Sector Committee, 1995).

As Thailand moves toward modified accrual accounting, the use of encumbrance accounting would provide better control over expenditures. Such a system requires the government to record a purchase transaction when the purchase commitment has been made as evidenced by a purchase order or contract. Thus, the agency is aware of its

financial obligations prior to receipt of the good or service, and they will not commit the funds to other projects.

At the present time, Thailand prepares a Statement of Receipts and Payments, Statement of Financial Status, Report on Currency Reserve Account and Notes to the financial statements. The PSC considers these appropriate for a cash basis entity. As the Thai reporting system evolves, new financial statements will be needed to provide the required information to assess government performance and financial position. These new statements would include a Statement of Financial Position, Statement of Financial Performance, Statement of Cash Flows, and Notes to the financial statements (Public Sector Committee, 1998).

Currently, Thailand uses PPBS for budgeting. The suggested changes would enhance this process. A computerized system would provide timelier reporting of actual receipts and expenditures, and enable quicker determinations of variances from the existing budget allowing the Thai government to adjust its financial policies rapidly in response to this information. Further, timelier information on actual receipts and expenditures would provide more accurate predictions for future budgets. Such a system could also provide better information on the actual costs of government programs for decisions on the pricing or privatization of services (Bowsher, 1988; Ziebell and DeCoster, 1991). In addition to automation of the system, changing to the modified accrual basis, improved asset and debt management, and the use of encumbrance accounting would furnish a better understanding of actual resource inflows and outflows to enhance government planning of future service needs and their funding. Finally, the new financial statements would contain more information for assessing government goal accomplishment, a basic tenet of PPBS.

## Improving Auditing

The first modification Thailand should consider for its government auditing function is a change in the location of the Office of Auditor General within the overall government structure. Although labeled an independent public agency, the Office of Auditor General is selected by and reports directly to the executive branch (State Audit Act, 1979). As the executive branch is responsible for government accounting and reporting, there is potential for the Office of Auditor General to be influenced by the Prime Minister. Repositioning the Office under the legislative branch, with selection by the Parliament and reporting directly to this body, would provide a stronger appearance of independence from the accounting function. Such a division of accounting and auditing authority between the legislative and executive branches is used in the US (Dittenhofer, 1996; Trask, 1996).

The State Audit Act, B.E. 2522 gives the Office of Auditor General the authority to perform financial, compliance, and operational audits of governmental units and state enterprises. At the present time, the principal work of the Office of Auditor General is to audit financial statements, and to validate that accounting documents are accurate (State Audit Act, 1979; Governmental Accounting, 1991). Although the vouching of accounting documents is reasonable for "regularity and control," as a government evolves to the "financial management" stage, audits must focus on lowering government costs and improving government efficiency (Mosher, 1979; Dean, 1988). Thus, the Office of

Auditor General's concept of compliance and operational auditing must mature to include regular reviews of every agency, use of audit sampling techniques, analytical reviews, and review of internal controls and risk assessment to accomplish its task (Mosher, 1979; US GAO, 1994).

Review of the reporting procedures of the Office of Auditor General notes that financial statement audits are presented to the Prime Minister and forwarded to Parliament. Voucher audits, however, focus on encouraging the audited agency to correct defects noted or to comply with the laws and regulations without involving supervisory officials. Only when the audited agency does not make the corrections, does the Office of Auditor General report the audit results to the supervising authority of the audited agency (Governmental Accounting, 1991). Therefore, the audit results are often not reported to higher authorities unless there is a serious fraud or corruption. To gain improvement in the accounting process from such audits, the Office of Auditor General should report all audit results and recommendations to the supervising body of the audited agency and make them responsible for instituting corrective action. The Office of Auditor General should follow up its recommendations to ensure the corrective actions are taken. This procedure would be similar to the GAO requirements to report audit findings to the auditee and to responsible individuals or audit committees. US *Government Auditing Standards* specifically require reporting to parties outside the auditee in the finding of irregularities or illegal acts (US GAO, 1994).

The objective for establishing the Office of Auditor General was to ensure that government funding and government performance achieve a balance in the acquisition and use of the limited resources available to the nation (Governmental Accounting, 1991). The evaluation of governmental performance cannot be accomplished if the Office focuses only on financial auditing and voucher audits. Further, to utilize PPBS to its full potential, the Thai government must have information on the accomplishments of its programs (outcomes), as well as measures of input and output. Performance auditing includes evaluating an entity's stewardship of government resources, and review of the entity's achievement of its purpose or goal. Such an audit incorporates recommendations for improvement or alternative methods of service delivery for consideration by decision makers (US GAO, 1994). To facilitate the evolution to the next stage of government financial systems, "financial management," the Office of Auditor General must embrace performance auditing to provide information on where resources are being most constructively applied in service to the public.

## CONCLUSIONS

The current state of government accounting in Thailand, manual and cash basis, is rudimentary at best. With the financial crisis of 1997, the Thai government needs better and timelier information to make decisions on the services to be provided to the public, as well as for budgeting, pricing of government services, and privatization decisions. This can only be achieved by moving to modified accrual accounting to facilitate asset and debt management, recording a wider range of accounting transactions with more stages in the transactions, and automating the accounting information system.

Current government auditing in Thailand is limited to the review and endorsement of the "State" financial statements, and to voucher audits. To provide better service to the Thai government, the Office of Auditor General must expand its audit scope to encompass a more comprehensive review of agency performance to aid the nation in improved utilization of its scarce resources. To achieve this end, the Office must refocus its audit procedures from a detailed review of documents to a more analytical approach and revise its reporting procedures.

The current economic crisis in Thailand makes the need for change in governmental accounting, reporting, and auditing imperative for informed decision making on the providing of government services and the raising of government revenues to assure a return to fiscal stability. The Thai government, however, faces a "Catch 22;" it must change the government financial system to recover from the current crisis, but the lack of cash flows as a result of the crisis make it impossible to institute the massive changes needed.

## NOTE

1. Economy is the quality and quantity of inputs used to produce a given output. Efficiency is the ratio between output and inputs, sometimes called productivity or unit cost. Effectiveness is the achievement of a desired outcome to the public.

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# Book Review Section

The book review section is interested in works published in any language, as long as they are comparative or international in character. The author or publisher of such works should furnish either book review editor with two (2) copies of the work, including information about its price and the address where readers may write for copies. Reviews will be assigned by the book review editors. No unsolicited reviews will be accepted. Suggestions of works that might be reveiwed are welcomed.

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# Capsule Commentary

**Understanding IAS. Analysis and Interpretation of International Accounting Standards,** *by PricewaterhouseCoopers (PricewaterhouseCoopers [UK], 1998), second edition, 830 pp.*

This handbook is a major treatise on International Accounting Standards (IASs) as of October 1998. Not only are the extant standards and E62 on financial instruments summarized and explained, but also the changes wrought by recent revisions are identified, and throughout the discussion, the firm gives its opinion on how the standards should be interpreted and applied. One-fifth of the book consists of a comprehensive disclosure checklist, a set of illustrative financial statements prepared in accordance with IASs, a glossary and index.

This is an invaluable reference work for auditors, company controllers, accounting academics, financial statement users, and regulators.

In view of some recent criticism of the lack of global enforcement of IASs by the Big Five audit firms, PwC's statement of position is of interest: "PricewaterhouseCoopers seeks to ensure world-wide consistency in the interpretation and application of IASs. Any statement by directors or auditors about compliance with IASs should be clear. A statement of full compliance (that is, 'unqualified') requires that all relevant IASs and Interpretations issued by the [Standing Interpretations Committee] have been followed in all material respects" (p. iv). This handbook should go a long way toward contributing to that end.

Copies of *Understanding IAS* are available for US$50 each. An order form may be obtained from Kerstine.Stephenson@us.pwcglobal.com. PwC has also published a 46-page booklet, *International Accounting Standards, Similarities and Differences: IAS, US GAAP and UK GAAP*, as well as booklets on selected IASs. These are available at no charge.

S.A.Z.

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# Book Reviews

**Accounting in the Asia-Pacific Region,** *edited by Nabil Baydoun, Akira Nishimura and Roger Willett, John Wiley and Sons (Asia), Singapore, 1997, 426 pp.*

In the recent years, there have been a number of books written about accounting practices in various countries, of which this volume is one. The editors have done the following to distinguish their book from the others.

1. The relationships between cultures and accounting are highlighted in the first chapter, "Environmental Considerations in Studying Accounting in the Asia-Pacific Region," and the last chapter, "Reflections on the Relationship between Culture and Accounting Practices in the Asia-Pacific Region," as well as in some relevant sections of the other chapters. As this is an important aspect that is difficult to capture and, hence, is often ignored, its inclusion has made a very large contribution to the value of this book.
2. The format and headings for the chapters on the individual countries are very similar. This facilitates comparisons of the practices across the countries.
3. With the exception of two or three countries, the authors of the chapters were affiliated with organizations within the countries on which they were writing. That, coupled with the background information provided on each country, attempts to give an "insider" perspective of the practices within the countries.
4. Furthermore, by providing the background information and the historical development of the profession within the countries covered, the reader is better able to appreciate the choice of accounting methods and prevalent practices in both financial reporting and management accounting.
5. The number of countries included in the book is commendable. Aside from the usual countries like Japan, Australia, Malaysia, etc., countries such as Brunei, Papua New Guinea, both Koreas, Macau, Cambodia and Vietnam were also included.

The inclusion of the former Communist countries, especially Vietnam, is especially interesting. As expected, the Vietnamese accounting system is not very sophisticated; in fact, in line with its economic transition, the accounting system is undergoing significant changes. As Vietnam had recently joined the ASEAN grouping, one would expect the accounting system to evolve along the lines of other ASEAN countries and resemble the Anglo-American accounting system. But the system described by the author seems to

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follow the French system, borrowing heavily from the French *Plan Comtable Général.* There is also an emphasis on cash flow rather than on accrual principles. The evolution of the Vietnamese accounting system discussed in the chapter makes it very thought-provoking and demonstrates the impact of environmental forces on accounting development.

Given the socialistic values of the Communist system, the move to open up its market toward a more capitalistic system requires a change in the accounting system. However, given the vast differences in practice, it has chosen not to make an abrupt switch. Rather, it is an evolution, with the French system seen as transitional before a more permanent system is put in place. However, the form of the permanent system is still unresolved, with the political and academic power in Hanoi preferring the French system, while the economic power (especially the business circles and financial institutions) in Ho Chi Minh City preferring the Anglo-American system. The conflicts between the various interest groups would probably appear in analogous form in any country undergoing a transition period; hence, the Vietnam experience would yield valuable lessons for both practitioners and academics. It would also be interesting to see the future evolution of the Vietnamese accounting system and whether it would bow to pressure and move toward an Anglo-American system.

In evaluating the contribution of this book, I have considered the intended uses of the book as set forth in the Preface, namely: "to professionals who wish to become acquainted with some basic facts about accounting practices in the Asia-Pacific region, to academics as a starting point for research into deeper issues, and to teachers who wish to mount specialised courses in the field of international accounting."

While the editors appear to have given much thought to the layout and contents of the book, the following diminishes its contribution.

1. Although countries like North Korea and Cambodia, where very few studies and surveys have been conducted with respect to their accounting practices, were included, there was little attempt to gather current information. Most of the data used to support the position taken by the authors are based on earlier studies, some of which were done in the 1980s. In cases where no prior studies were done, the authors did not take the initiative to gather the more up-to-date information, which would have been useful for the intended audience. This is especially so for management accounting, where the discussions tend to be rather brief. In fact, for Papua New Guinea, North Korea and Vietnam, a discussion on management accounting was totally omitted.
2. The chapters were written more from a historical perspective. Starting with the origins of the profession, they then describe the reporting requirements and the evolution of financial and management accounting in the various countries. Unfortunately, the 1990s has been a period of changes, including the return of Hong Kong to China, the liberalization of trade barriers of Communist countries such as China and Vietnam, the downturn in the Japanese economy, and the economic crisis in the ASEAN countries. The impact of these changes on accounting was not evident from the book. While some of these events occurred after the book was published, others (such as the return of Hong Kong) were foregone conclusions, and their impact on accounting could have been discussed. Such a treatment would have made the book more relevant, especially for practitioners.

3. The disadvantage of not having a local author is highlighted in the chapter on Singapore and Malaysia, where, on page 113, the authors wrote, "Accounting degrees are offered at the National University of Singapore." The National University of Singapore no longer offers accounting degrees; such degrees are offered at the Nanyang Technological University.

In conclusion, while this book is useful in providing the basic facts about accounting practices in the Asia-Pacific region, its usefulness, especially to practitioners, is somewhat limited due to the important changes that have occurred in the business environment in several countries within the region. However, the book is strongly recommended as a starting point for research into deeper issues in international accounting, as it does provide the economic background and historical development of accounting. It is difficult to put together a book on accounting practices in different countries, as the business environment is rapidly changing. The editors' effort and commitment to this project are highly commendable.

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**International Accounting and Multinational Enterprises,** *by Lee H. Radebaugh and Sidney J. Gray, John Wiley & Sons, New York, fourth edition, 1997, 696+xiv pp., US$32.60.*

This book on international accounting was an initiative of Jeffrey Arpan and Lee Radebaugh in 1981. After two editions, Sidney Gray took over from Arpan, bringing in a more European focus on the issues that international accounting tries to address. At the time, Gray was lecturing at the University of Warwick (UK), while Arpan was at the University of South Carolina (US).

According to the authors, the book tries to emphasize the broader international business environment and the context in which accounting is practiced worldwide. It focuses on the business strategies of multinational enterprises and how accounting applies to these strategies. Compared with the second edition (1985, the last edition written by Arpan and Radebaugh), the book has been elaborated considerably. It has been doubled in size, international financial statement analysis has been added, and a considerable number of illustrations from financial reports have been included. The authors claim that the addition of Gray brought a stronger European perspective. Indeed, two European countries were added to the countries described, and a number of illustrations from European financial reports were included. However, the role of the European Union has not been given much more attention.

Compared with competing books like Nobes and Parker's *Comparative International Accounting* (1998), Roberts, Weetman and Gordon's *International Financial Accounting: A Comparative Approach* (1998) and Walton, Haller and Raffournier's *International Accounting* (1998), Radebaugh and Gray focus much more on the conceptual and management accounting and control aspects. In this respect, their book covers issues like cultural and societal values and the political dimensions of

international accounting. And it pays considerable attention to international business and multinational strategy, management control of global operations, international performance evaluation, and international product costing than do the others. On the other hand, compared to the other three books, fewer pages are spent on descriptions and comparisons of national accounting systems. In fact, there is only one chapter comparing a number of countries. A comparison with the new edition (1999) of Choi, Frost and Meek's *International Accounting* reveals that these books share the same philosophy and focus on the same subjects and, therefore, have the same balance between financial and management accounting subjects. However, Radebaugh and Gray have been more elaborate and have included a chapter on international auditing. Choi, Frost and Meek, however, describe more countries and pay specific attention to the activities of the IASC and the European Union.

Like other books on international accounting, the greater part of *International Accounting and Multinational Enterprises* covers financial reporting topics rather than management accounting topics. After the introductory part 1, part 2 deals with comparative accounting and harmonization. It discusses the causes of international diversity, classification of accounting systems, and descriptions of national accounting systems. It continues with pressures for international accounting harmonization and disclosure and the perspective of multinational enterprises (MNEs). The book was updated through the end of 1996. Therefore, it does not cover the recent important developments concerning the possible endorsement of International Accounting Standards (IASs) by the International Organization of Securities Commissions (IOSCO). This means that some of the conclusions drawn are no longer correct, such as the fact that IASs are rather flexible and accommodate each of the various national views on accounting and that IASs are hardly applied in practice. The description of the initiatives undertaken by the European Union is correct but brief. It is unfortunate that the policy statement issued by the European Commission at the end of 1995, in which it expressed its support for IASs, was not covered in the book, because it links the two main harmonization programs in the world to each other and places the role of IASC in a different perspective.

Part 3 of the book covers technical areas that are particularly relevant for MNEs. These include consolidation, foreign currency translation, financial instruments, segmental reporting and inflation accounting. They contain descriptions and evaluations of the generally accepted accounting principles in the US and the UK and under IASs, and they occasionally discuss particular continental European practices and the impact of the European Union in this regard.

Part 4 continues with international financial analysis. It describes the outcomes of research into the effect of accounting diversity on decision makers and explains some major differences between categories of countries. Surprisingly, the Netherlands is classified under "Nordic Accounting," where Nordic accounting means something like Anglo-American accounting but with a significant influence of taxation. There is hardly any tax influence on accounting in the Netherlands. Which brings us to the whole notion of trying to classify countries. Radebaugh and Gray come to the conclusion that research in this area is still in its infancy. Still, they address classification in various parts of their book. In my opinion, it has become more and more obvious that the classification of countries has become rather meaningless, given the fact that companies adopt foreign standards (such as US GAAP or UK GAAP) or IASs and make a distinction between their

parent-company and consolidated accounts. Nobes and Parker have identified such in their new classification schedule.

Radebaugh and Gray rightly recognize the fact that strategic and other non-financial disclosures are becoming more and more important. They identify some trends in the required and voluntary disclosures by MNEs and try to explain voluntary disclosures by looking at the specifics of companies and their locations.

Part 5 deals with international management accounting and control. As mentioned above, this topic receives more attention here than in other books on international accounting. It is not only transfer pricing, but also budgeting in a MNE and performance evaluation that are covered in these chapters. Radebaugh and Gray also tackle international developments in management control, centralization vs. decentralization and the related management information systems, and the strategic control process and costing for countertrade arrangements (such as barter trade).

The last part covers miscellaneous subjects such as international taxation, international auditing and future developments. Unfortunately, the chapter on international taxation is written predominantly from the perspective of a US-based MNE. It might also be worthwhile to link this chapter to the other chapters, where the relationship between financial reporting and taxation is discussed. The chapter on external auditing is fine and addresses the issues from the point-of-view of both multinational accounting firms and their clients. The last chapter provides an overview of expected developments in each of the areas addressed in the book. This is food-for-thought both for MNEs and students.

Most of the chapters start with chapter objectives and close with a summary, study questions, discussion points and cases. This makes the book very suitable for courses in international accounting and for certain parts of courses in advanced accounting. An instructor's manual is available which includes suggested course syllabi, an outline of each chapter, solutions for problems and cases in the text, a multiple-choice test bank and transparency masters.

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**International Financial Accounting: A Comparative Approach,** *by Clare Roberts, Pauline Weetman and Paul Gordon, Financial Times/Pitman Publishing, London, England, 1998, 702+ xvii pp.*

This textbook adopts an interesting and well-organized approach to comparative accounting across specific countries and regions. It contains 19 chapters organized in three main sections.

Part I discusses and describes the forces that shape accounting systems (institutional structures and culture), explains very comprehensibly the process and results by which generalizations about similarities between specific accounting systems have been developed, and intelligently develops International Accounting Standards as the bench-mark accounting system to be used in the country chapters that follow. In doing so, it sets

the stage for an informative comparison in Part II of accounting principles and practices in 10 countries and the European Union. The countries described in detail illustrate the accounting systems in Continental Europe (France, Germany and the Netherlands), the Anglo-American cluster (the U.K., Australia, and the U.S.), Eastern Europe (Hungary), Asia (Japan and China), and the Arab countries (Egypt).

The textbook concludes with two chapters in Part III which introduce the effects of international accounting diversity in global capital markets. Although the book is targeted at advanced accounting elective classes in undergraduate programs, and to classes in MBA and Masters of Accounting courses, it is so rich in institutional detail and historical context that it will also serve as an excellent and engaging reference book for international accounting researchers and doctoral students.

The strengths of this textbook are (1) its excellent structure and adaptability for courses of varying duration or varying levels of supplementation, (2) its inclusion of at least some academic research in an interesting and relevant manner, (3) its extensive presentation of "real world" financial statement examples from firms in many jurisdictions, and (4) its use of comparisons and statistics on related phenomena to motivate the issues analyzed in the text. It is written clearly and concisely, and from a global perspective with only minor U.K. bias, rather than from an "international" perspective with a U.S. bias (by contrast with several of the other popular international accounting textbooks). The authors largely take as their benchmark International Accounting Standards (IASs) rather than any one country's GAAP. Appropriate and comprehensive treatment of the setting in which IASs are formulated and the specifics of their provisions and application are included in Part I, making it a useful and workable benchmark for students without respect to their previous country-specific accounting education.

In the U.S., this textbook will be most useful and appropriate in advanced accounting elective courses at the undergraduate level, and in MBA and Masters of Accounting programs when considerably supplemented with additional research findings and citations, and more structured cases and exercises. My major suggestion for improvement in the next edition of this textbook is to include more research on the communication between global firms and their stakeholder constituencies. In general, financial statements are used by individual equity and debt investors, as large institutional investors in debt and equity generally have privileged access to financial information and firm management, as do banks providing significant financing, employees on supervisory boards, host governments, and other important stakeholders of the firm. Therefore, more consideration of the value of public disclosures in organized capital markets, and the rich research literature into the uses of accounting information in global capital markets, would be helpful in large MBA programs in the U.S. Frequently, the students taking accounting electives in highly ranked U.S. MBA programs concentrate their studies in the area of finance. They are interested in learning about international financial accounting to help them evaluate and analyze the financial statements of foreign firms as alternative investment opportunities to North American companies, and to evaluate firms' disclosure strategies. The newly raised educational requirements for most U.S. accounting undergraduate students means that undergraduate students are also studying more finance, and a shareholder focus to describing and analyzing comparative accounting rules and practices is appropriate in these programs as well. Accounting measurement and disclosure issues are important in this context, because financial statements and other

accounting disclosures are important tools in decisions about capital allocation being made on organized stock exchanges.

A second suggestion for improvement of the textbook in the next edition is to strengthen the end-of-chapter materials. The questions very gently lead readers from straightforward recitation of factual material given in the chapters to very general applications of those facts and observations to the reader's own country or the country which is the subject of the chapter. In my opinion, the questions would be more useful if they were to require more specific applications to cases similar to those described in the chapters, or integrations or comparisons of the material in the chapter with specific information from students' experience or from new examples. The cases are good illustrations of various measurement and disclosure practices, but they lack the structure necessary to enable good students to "prepare the case" for discussion in the classroom. This structure is provided in cases from other sources by required analyses and/or integrative or judgmental questions leading to an overall recommendation for appropriate action. However, my (limited) experience indicates that these attributes of end-of-chapter material are much more important in typical U.S. classrooms than they are in non-North American educational settings, so following this suggestion may be useful only to U.S. educators.

A final material suggestion for the next edition is to include a country or countries that illustrate the special issues of Latin America, especially as these countries are subject to substantial rates of inflation and currency variability and the resulting vulnerability of the historical cost model. More and more Latin American countries are listing on European and North American exchanges, and their unique problems in communicating with their foreign investors would nicely round out the country coverage in Part II of the text.

Reviewed by Grace Pownall
Emory University
Atlanta, GA, USA

# INSTRUCTIONS FOR AUTHORS

**AIMS and SCOPE**. The aims of *The International Journal of Accounting* are to advance the academic and professional understanding of accounting theory and practice from the international perspective and viewpoint. The *Journal* recognizes that international accounting is influenced by a variety of forces, e.g., governmental, political and economic.

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# Introducing the New Editor of The International Journal of Accounting

My term as editor of *The International Journal of Accounting (TIJA)* will end with Volume 35, Number 3, issued in the third quarter of the year 2000. The support received from our authors, staff and publishers has been fantastic. I have enjoyed my time as editor of our journal and will miss my interactions with the authors, staff and publishers of TIJA.

Professor Young Kwon, the A.C. Littleton Professor of Accountancy at the University of Illinois is the new editor. His appointment begins immediately, however, we have agreed that I will handle a subset of existing manuscripts sufficient to meet the publication requirements through Volume 35, Number 3. Professor Kwon's first issue of record will be Volume 35, Number 4 due out in the fourth quarter of the year 2000.

All new manuscripts submissions should be addressed to Professor Kwon at the TIJA address included in this issue. Professor Kwon is already active in handling new submissions. Authors of already submitted manuscripts have received individual communications concerning the status and future management of their submissions.

A short biographical sketch for Professor Kwon is presented here.

Professor Kwon earned two Ph.D. degrees, one in mathematics from UCLA in 1969 and the other in accounting from University of Texas at Austin in 1978. Before joining the Illinois accountancy faculty in 1985, he previously taught mathematics at the Korean Air Force Academy, Seoul National University, UCLA, and University of Texas at Austin, and taught accounting at the University of California at Berkeley and the University of Kansas at Lawrence. He has research interests in analytic modeling of accounting issues and evaluating the effects of accounting information on resource allocation using agency, signaling, and game theories. He has published in the *Journal of Accounting Research, Journal of Accounting and Public Policy, Journal of Economic Theory, Rand Journal of Economics, Journal of Finance, Journal of Economic Behavior and Organization, Journal of Optimization Theory and Applications,* and other refereed journals.

Please join me in welcoming Professor Young Kwon as the new editor of *The International Journal of Accounting.*

Andrew D. Bailey, Jr., Editor

# THE INTERNATIONAL JOURNAL OF ACCOUNTING

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## ARTICLES

## BOOK REVIEWS

The International Journal of Accounting

# The Information Environment of China's A and B Shares: Can We Make Sense of the Numbers?

**A. Rashad Abdel-khalik,* Kie Ann Wong,† and Annie Wu‡**
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**Key Words:** Emerging markets; Information content; Market segmentation

***Abstract:*** *In 1990, three stock exchanges were opened in Shanghai, Shenzhen and Beijing. Partial privatization of China's enterprises began with offering two types of shares: A shares are sold only domestically to locals and are denominated in local currency; B shares are denominated in dollars and are sold only to foreign investors. All listed firms offer A shares, but to qualify for offering B shares, the firm must prepare financial statements in accordance with International Accounting Standards and also meet other requirements. Firms issuing A shares only adopt domestic accounting regulations.*

*As a way of generating capital funds, market segmentation has been a success. Both types of shares, however, have two different information environments. The environment of A shares appears to be dominated by local regulations and customs at the time of offering or trading. The information environment of A shares appears to be relatively unstructured and is affected by informal communication between various groups. Other than the roles played by state officials and appointed managers, external monitoring of A shares appears to be limited. Independence and social acceptance of auditing appear to be making slow progress, especially when the majority of domestic CPA firms are government owned. In contrast, the information environment for the B shares is more structured because (1) financial reporting adheres to International Accounting Standards, (2) financial statements are audited by CPA firms with international practice; and (3) foreign investors — mainly large financial institutions — also act as external monitors.*

*We elaborate on the differences between these two information environments and suggest that accounting earnings and A share prices are not correlated, but earnings and share prices are correlated for B shares. In an event-study approach, we find results inconsistent with both hypotheses — for 1994 and 1995 we find that earnings and unexpected returns are correlated for A shares but not for B shares. The high price volatility, the significant and continuing dominance of government officials, and the thinness of trade in B shares are offered as possible explanation for these results.*

Once the People's Republic of China (PRC) allowed its citizens to own and operate business firms; actions were undertaken to facilitate capital formation. Reactivating the

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stock exchange after having been abandoned for 4 decades was accompanied by regulatory reforms and by a move to partially privatize state-owned enterprises. PRC currently operates three stock exchanges, with the two most active stock exchanges being the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SEZ). The third, Beijing Stock Exchange has, at the time of this writing, two stock trading centers for institutional holders of equity shares of 17 companies only. Our analysis concentrates on SSE and SEZ.

The newly privatized firms were authorized to issue various types of shares. Most common are A shares that are sold only to Chinese in the mainland, B shares that are sold only to foreign investors. More recently, a few firms issued H and N shares that are sold to foreign investors through listing on the Hong Kong stock exchange and on the New York Stock Exchange, respectively. H and N shares are relatively new instruments and only a few were able to offer these types of shares.

All firms listed on SSE and SEZ issue A shares, but less than one-fifth of those firms issue B shares. As of November 1996 there were 467 listed companies, of which 82 (17.5%) had issued B shares and prepared financial statements in accordance with International Accounting Standards (IASs issued by the International Accounting Standards Committee [IASC]). These requirements are intended to signal a degree of reliability and assurance to foreign investors. Segmenting capital markets in this fashion allows firms to finance their capital requirements from local savings as well as international funds and, as a result, large amounts of foreign funds had flowed into China.

In recent years listed firms have published their financial statements bi-annually in the newspapers; there are no other known systematic or organized means of disseminating the information to investors.

## THE RESEARCH QUESTION

We began this project with the anticipation that the emergence of stock exchanges in PRC creates an interesting setting for studying the role of information in emerging capital markets. Because of their recent origin, different emerging capital markets are at different stages and do not have information systems of the types known in the more developed capital markets. Of particular interest to us is the role of accounting information in pricing common stocks. The unbiased and fast assimilation of accounting information in security prices is a phenomenon that is well documented in developed capital markets beginning with the work of Ball and Brown (1968) (for reviews, see Bernard, 1990 and Beaver, 1998), but has not been well examined in developing economies.

Breaking with conventional methods of research in capital markets, we view the role of information in emerging capital markets to be dominated by domestic institutional arrangements, cultural norms of communication and local customs of doing business. These factors interact to reduce data reliability at both transaction and aggregate levels. The maturation of markets and the financial sophistication of participants in those markets are not likely to have evolved to the level that can facilitate formulating historical trends and relationships between stock prices and accounting information.

## RESEARCH PLAN

To build a case for the issues of relevance in studying emerging capital markets, we first highlight some basic conditions that must exist in order to conduct information content analysis. Those conditions often remain in the background and are always assumed to be satisfied. This is followed by a brief discussion of the extent to which we believe these conditions to be satisfied in emerging capital markets. A discussion of capital markets and the role of the accounting profession in PRC begins by distinguishing the information environments for A and B shares. Finally, using data from the Shanghai and Shenzhen stock exchanges, the association between accounting disclosures and share prices is examined in each of these two information environments separately. Because the firms issuing B shares adhere to a relatively higher standard of information-reporting reliability than those issuing A shares only, we hypothesize that the association between unexpected rates of return and accounting information differ for those two types. In particular, that the pattern for B shares is more likely to be similar to what we know in the extant literature, but no particular pattern was expected for those issuing A shares only. We use data for 1994 and 1995 in an event study design to test this hypothesis. *The results are inconsistent with expectations* in that the pattern of unexpected returns around earnings announcements for B shares appears to be random but, surprisingly, the results for the A shares are similar to those obtained in developed capital markets.

After reflecting on the information environment of A shares and on the extent to which the conditions for studying information efficiency are satisfied, we could not interpret these results as reflecting a causal relationship between accounting numbers and share prices. We realize that others might use the same results to make different inferences, but analysis of the setting and information obtained directly from market participants does not support making inferences about the information content of accounting numbers. As is elaborated below, most CPA firms are government owned and a corporate governance culture is evolving although the state continues to be the majority shareholder (of about 80% of equity) in privatized firms (Zhang, 1996). This structure does not provide for the independence of information producers and market makers.

### Relevant Factors for Information Content Analysis

#### *Basic and Necessary Conditions*

The research on information content in the setting of developed and mature capital markets implicitly assumes some necessary conditions that must prevail in the information environment in order to give credence to any market tests of information content. Some of these conditions can be stipulated as follows:

1. Transaction-related data and source documents of accounting systems are the outcome of arms-length exchanges.
2. Transaction data are consistently aggregated in accordance with a known set of rules.
3. Effective internal controls are in place to safeguard the company's assets and to reduce opportunistic behavior.

4. Internal audits are implemented to ensure the integrity of the information system, input data and produced information.
5. Market prices reflect the preferences of market participants.
6. Capital markets are free of manipulation by regulators, individuals in power or capricious government interference.
7. Insiders do not use their informational advantage for their own gain before allowing equal access to other investors.

These conditions are generally satisfied for listed firms in developed economies where financial and accounting institutions, the public, the press and regulators act as external monitors or "watch dogs" that assure the integrity of the data reported to the public. In addition, enforcement agencies exist for dealing with serious departures from the expected norms. In that setting, researchers can reasonably assume that investors vote with their feet, capital markets operate efficiently, and prices reflect all publicly available information. To make reliable inferences about accounting information content, markets must operate with the least possible friction, a case that is difficult to make for many emerging capital markets.

### *Information Content in Emerging Capital Markets*

There are various reasons why share prices in emerging capital markets may not satisfy the conditions listed above. Indeed, the efficiency of emerging capital markets has not been established because reported data and recorded stock prices may not reflect the free expression of the preferences of all market participants. Unique factors of local customs, bureaucratic regulation, the absence of a developed accounting and auditing profession, undue influence of state officials, and loose insider trading constraints do interact to impact the operation of capital markets.

A couple of illustrations might help to highlight this problem. Prior to May 1992, regulators of the SSE imposed tight controls over all share prices and trading volume. Although much of the underlying motives remain behind the scenes, to public observers these controls were manifested by imposing two constraints on trading in A shares, both aimed at reducing volatility. These constraints were: (1) the maximum allowed daily fluctuation in the price of any listed share cannot exceed 1%, and (2) trading prices should not change if volume of trade does not exceed 0.3% of the number of outstanding shares. On May 5, 1992, the allowed maximum daily fluctuation in prices was increased from 1% to 8%, but restrictions on the minimum volume required to trigger price changes were retained. On May 21, 1992 both measures of control were abolished. While the imposition of such regulatory controls on market forces has prevented share prices from reflecting the true preferences of market participants, it also has artificially maintained low levels of volatility. Upon lifting the restrictions on May 21, 1992, share prices more than doubled and the SSE price index increased by 105.3% in one day.

Another case of conspicuous regulatory interference with market processes in emerging capital markets was observed at a stock exchange in an Eastern European country (the "Exchange") at the early stages of privatizing business. One of the authors witnessed a slice of the operations on that exchange in 1992 when the exchange had only 12 listed companies and trading shares took place on Tuesdays and Thursdays only. Fifteen minutes

before the official closing time, the chairman of the "Exchange" went to the trading floor, rang a bell and a bulletin board revealed the 12 closing prices for the day. On that particular day, the then chairman, a Western-educated man, went to the floor and, with news reporters and other observers looking on, unilaterally changed the prices of two stocks that he felt to be out of "acceptable ranges." The closing price of what he perceived to be an "over priced" stock was lowered, and the price of another stock that he perceived to be "underpriced" was increased. The newly dictated prices became the opening prices for the next trading day.

It was evident that the chairman of that "Exchange" saw his role as a market maker and a smoothing agent whose task was to reflect what he thought to be the "true" price. While it was never made clear, as far as we know, how the chairman of the exchange had individually arrived at those so-called "true" prices, making these changes could conceivably signal to other market participants that the chairman was in position of private information. In that event, this unilateral act might exacerbate a trend the chairman of the "Exchange" has independently charted irrespective of other market forces. Because of this action, opening prices on a given trading day differ from closing prices for the same stocks on the preceding trading day. Thus, reported share prices in those markets would not have the same attributes of prices generated from the interplay of normal market forces.

## The PRC Setting

### *Stock Exchanges*

Two major PRC stock exchanges began operations in 1990 — these are the SSE and the SEZ. Both exchanges trade A and B shares. According to market reports, the SSE draws more capital from the local and Taiwanese Chinese, while SEZ, which is located in south China near the border of Hong Kong, draws funds from investors in Hong Kong and the West (Kaye, 1992; Sender, 1992b).

These stock exchanges were established to facilitate trading the portion of equity shares (estimated at about 20% of equity) of the newly privatized firms whose ownership the government had decided to release to private investors. In all cases, however, "land" continues to be owned only by the state and is valued as an intangible (Zhang, 1996). Although problems arise in the valuation of state-owned companies because of the lack of market price information to value their assets, the movement toward privatization was followed by a steady growth in the number of privatized firms. As of October 1994, stocks of 164 firms were traded on SSE, and of 103 firms were traded on SEZ. The numbers increased to 184 and 127 in 1995 for the SSE and SEZ, respectively.

As indicated earlier, we will concentrate on the two common types of equity instruments that can be owned by individuals: A and B shares and are traded only on domestic exchanges. The former is denominated in yuans (the domestic currency) and is owned and traded *only* by citizens, while the latter is denominated in US dollars and is owned and traded by foreign investors *only*. As of December 1995, of the 184 listings on SSE, only 36 had issued B shares, and of the 127 listed on SEZ, only 34 had issued B shares. In December 1995, market capitalization had reached estimated levels of about US$40 billion for A shares and US$2 billion for B shares (Shanghai Securities News, SSE, January 7,

1996). Additionally, because of the size difference between these two markets, in August 1994, the government announced its intent to facilitate trading in A shares by foreign investors, but only through fund management organizations (Hansell, August 1994).

This segmentation of capital markets has succeeded in raising capital from citizens and foreigners, but it is not at all clear why *the price of an A share is more than three times the price of a B share in the same firm.* This disparity might, for example, be reflecting the effects of two distinct demand functions for stocks, with three factors could be stipulated as enhancing the demand for ownership of A shares: (1) industries in the southern region where SEZ is located are relatively young and are growing at fast rates; (2) the enormous pent-up demand for consumer and durable goods assures the ability of these firms to convert all of their production into revenues; and (3) allowing prices to change with market conditions heightens the expectations that producers will share more of the consumer surplus and earn abnormal profits, especially since the PRC economy is estimated to have been growing at more than 8% a year.

### *The Accounting Profession*

For four decades, the communist rule prohibited private ownership, organized and free capital markets and the operation of a market price system, which has impeded the development of accounting and the infrastructure required for the flow of price relevant information. Prior to the recent move to allow private ownership of capital and to operate a market economy, the accounting focus had been on a few tangible measures: i.e., the existence of physical assets, growth in sales and cash flows. This focus emanated from the government's policies that measured firms' success by growth in output and employment statistics. Also, the focus on cash flows was considered essential in order to account for the enterprise's use of the funds appropriated by the state.

Although the information available about accounting as both a process and a profession in PRC is often incomplete, accounts of recent developments can be found in Zhang (1996), Qing et al. (1998) and Xiang (1998). Historically, conflicting descriptions appeared in the financial press. On the one hand, it is reported that, under prior systems, all transactions were recorded and "meticulously supported by vouchers" (Sender, 1992a) in a manner consistent with the Confucian philosophy of keeping historical records. On the other hand, the magnitude of missing controls were not reassuring:

> In most cases, there is no independent verification of critical items such as bank balances or account receivables. Prices charged from one month to the next for the same inputs are frequently inconsistent. In other cases, blank checks are presigned and written for amounts up to certain ceilings — the assumption being that if the actual cost is less, it will be refunded down the line. And there is no formal monitoring of stocks (inventory) either. (Sender, 1992a, p. 59)

Upon switching from a purely state-owned enterprise to a system of sharing ownership with private investors, the assets and liabilities of the firms being privatized had to be assigned some values in order to determine the extent of ownership equity. Additionally, special problems arose when the firm's debt included funds borrowed from foreign financial institutions since translating debt into the domestic currency at the prevailing

exchange rates has very often led to much higher obligations than the numbers recognized on the books. Against this background, it is understandable why preparing credible financial statements could be an extensive and highly costly undertaking of reconstructing financial statements from vouchers, appraisals and estimates. Even then, all appraisals have to be authorized and it is argued that the required "procedure is perceived as having too much government intervention, which may impair the independence of the valuation (appraisal) firms" (Zhang, 1996, p. 8).

Of the firms that the government had permitted to issue B shares (and adhere to IASs), "it took the Hong Kong-based office of Arthur Andersen about 6000 man hours in January and February 1992 to ready the financial statements of Shanghai Vacuum Electronic Device, China's leading television maker for its B-share flotation in February" (Fairlamb, 1993, p. 37). The encountered difficulties are explicitly noted by the Arthur Andersen's partner in the Hong Kong office who was in charge of about 50% of the B shares privatization (quoted in Fairlamb, 1993, p. 37):

> Valuing a firm can be a nightmare. It is often unclear whether enterprises actually own some of the assets — such as land, which is not generally tradable in China — included in their balance sheets. Working out the value of goodwill in a socialist context is also difficult, as is assessing the true worth of stockpiled goods. And predicting future profitability in an environment where many prices were until recently controlled and where the domestic currency is not freely convertible is highly risky.

Similarly, it took more than 30 Hong Kong-based accountants with Arthur Andersen (who spent over 11,000 man-hours) to prepare the financial statements of *Brilliance China Automotive Holdings*, (Sender, 1992b).

In recent years, the PRC's government has established China's Institute of Certified Public Accountants to regulate and govern the conduct of professional CPAs. the Institute is a quasi-government organization that proclaimed independence, fairness, and objectivity as the three most fundamental professional rules of conduct. Since then, Fang and Tang (1991) report an apparent acceleration of development in accounting standards. In 1993, the government issued *Enterprise Accounting Standards No. 1*, which mandated desirable accounting qualities to adhere to "authenticity, relevance, comparability, consistency, timeliness, distinctiveness and materiality." Although these characteristics have the tone of the qualitative criteria adopted by the US Financial Accounting Standards Board as part of its conceptual framework, it is not clear they have been put into action. For example, Xiang (1998) reports that the implementation of the 13 accounting standards that were issued in 1992 has been postponed in spite of the assertion that they are considered transitory because of their concentrating on the mechanical processes of recording.

Zhang (1996) offers a lucid description of some major problems in accounting in PRC. He highlights the major difficulty business firms encounter in valuing their receivables and debt. First, payment of obligations is very slow-paced; firms "have not yet developed the habit of confirming the amounts of receivables requested by auditors" (p. 3); "and the government arbitrarily dictated that allowance for bad debt should not exceed the range of only 0.3% – 0.5% of the total amounts" (p. 3). Zhang details other serious shortcomings in the accounting system, but most general institutional concerns arise from the fact that the majority of CPA firms are government owned, the Ministry of Finance is in charge of

making accounting and auditing standards, and auditors independence is at issue. In addition, the shortage of CPAs in China is critical; it is estimated that "78% are over 60 years old and 80% are retired personnel. Nearly all ... did not go through the CPA examination which was only introduced a couple of years ago" (Zhang, 1996, p. 23). According to Qing et al. (1998, p. 8), the biggest challenge facing the system is that the persistent ailment of lack [of ] fidelity [faithful representation] about accounting information [which is] widespread in China."

Creating an accounting profession and culture cannot be done in a short period of time, especially when the basic elements of arms-length exchanges remain to be developed. However, optimism and high expectations accelerate with every new proposal that offer hope for improved disclosure and information environment. For example, Xiang (1998) describes some cases of the planned transition that give rise to those expectations:

> The selection of depreciation methods and the estimation of useful life were administered by government regulations; further, the amount of the provision for doubtful accounts could not exceed a maximum percentage of the amount of year-end accounts receivable. These regulations are no longer required under the [proposed] detailed standards. The proposed detailed accounting standards intend to be more prudent with the application of the LCM rule, as well as to be more flexible in the choice of accounting policies and estimates. These proposed detailed accounting standards will move China's accounting practice closer to IAS. (Xiang, 1998, p. 115)

The slow development of a reliable information structure in China has not been without cost to the economy. Information problems seem to be a major reason in delaying many firms from being traded; an estimated 4400 enterprises are waiting to develop the capacity to issue A shares and most firms are allowed to issue A shares. In addition, the relative scarcity of reliable financial information has been considered a major contributor to the speculative nature of the market for A shares. Chow et al. (1995) offer additional insights on the role of various cultural factors in influencing the development of accounting in China (see also Hall and Hall (1987) for assessment of some broad differences in culture).

## Types of Information Environments

### *The Relatively More Formal Environment*

B shares are denominated in US dollars and are sold only to foreign investors, cannot be owned by citizens and their registration requires that financial statements be prepared according to IASs. Although the IASC has representatives from over 140 countries, it is a voluntary standard-setting body having only a professional advisory capacity and no enforcement mechanism. To accommodate a variety of cultures the IAS are less stringent and leave more for judgment than the corresponding professional standards in the United States of America (USA) or in the United Kingdom (UK). While IASs constitute the lower bound for the set of accounting principles about which there could be general acceptance across nations, they are well developed by comparison to most domestic accounting standards in countries with emerging capital markets.

Beyond the comprehensiveness of the standards, there are also qualitative differences between applying either USA or UK accounting standards and IASs. In spite of those differences, the London Stock Exchange allows foreign registrants to use IASs in their filings. To this date, no evidence exists of major financial problems arising from granting this privilege to foreign-based companies, suggesting that IAS standards have met a threshold of credibility that satisfies the rigorous demands of a field test.

The information environment for Type B shares includes disclosure of financial statements in the documentation of the initial public offering and semi-annually for the related fiscal periods. In addition, the investment funds that own B shares represent sophisticated foreign investors who monitor the issuing firms' activities and decisions. Since Chinese citizens are not allowed to own or trade B shares, these shares are relatively insulated from trade manipulation by insiders or state officials.

To summarize, the main features of the information environment of B shares are as follows:

1. financial reporting must follow IASs;
2. these standards require a level of documentation and system quality that ensures the credibility of aggregated numbers;
3. financial statements are audited by internationally recognized audit firms to assure compliance with IASs;
4. almost all B shares are owned by institutional investors; because of the need to continue the inflow of foreign investments, state officials are likely to avoid burdening the B share firms with domestic problems;
5. in the final analysis, investors, auditors and state officials perform different functions in monitoring the activities and performance of B share firms.

From these features, as well as the earlier statements by the Hong Kong-based Arthur Andersen, we conclude that the information environment of firms issuing B shares is relatively formalized and is not too dissimilar to other information environments in more developed capital markets.

### *The Relatively More Informal Environment*

In contrast with B shares, the information environment for A shares (available only for domestic investors) is much less formalized in terms of both reporting requirements and external monitoring. Osland (1990, p. 7) claims that "because of the extensive networks of relationships with significant interaction between people, communications among Chinese customers for a given product may be diffused very quickly. Word-of-mouth publicity takes on greater importance in China than in most Western nations."

This informality has become more apparent in connection with the procedures of making initial public offering of A shares. The informal communication networks of family and friends in the processing and execution of the initial public offerings of A shares was almost invited by the institutional arrangements that prevailed in the first few years of market operations. Until 1994, to offer new A shares to the public, the government had a complex system requiring prospective investors to purchase certificates of entitlement (CE, hereafter) that would entitle them to buy shares. The privatization

agency's role in the initial offering was to announce (1) the type of enterprise being privatized, (2) the location and date of the sale of these CEs to the public, and (3) the location and times allowed for exchanging CEs for actual shares. Typically, the announcements appeared in newspapers, which were posted in visible places for the public to read and to spread the word through their informal networks. Because of the huge demand and the cumbersome process, the locations used to issue CEs were typically large public arenas such as football fields. Until the end of 1993, to acquire one A share, a person had to present 10 consecutively numbered CEs. Yet, each person was allowed to purchase only a limited number of CEs per identification card (ID). This arrangement created a market for relatives, friends and others to pool their IDs and to strategically position the holders of their ID pools in waiting lines to maximize the number of 10 serially-numbered bundles of CEs. College students, including the one who helped with an early draft of this paper, found temporary jobs standing in lines for CEs, sometimes for as long as 3 days, which created serious problems.

> Lining up for three days in front of the Shenzhen Stock Exchange to buy overpriced share-application forms (certificates of entitlement) on 9–11 August (1992) was bad enough for the 1 million people from throughout China who had flocked to the SEZ [Schenzhen Exchange] for the occasion. But when it became clear that **insiders** had taken the forms, their patience ran out. In the rampage among themselves and with police that followed, more than 200 people were hospitalized. (Clifford, 1992, p. 53).

From the account of Chun Wang (a PhD student in agronomy who was once hired to pool IDs of different individuals), the CEs for a privatized auto company were dispensed at a football stadium in order to accommodate the large crowd that showed up to subscribe, with individuals holding onto each other to keep their places in line and to keep their pools of IDs together. Because of the allegations that insiders, party members and favored officials scooped a larger percentage of the initial public offering prior to making it available to others, the government has taken steps to reduce the ratio of required CEs for purchasing shares as well as some other controls, which were not specified in reporting to the public.

In this type of information environment, even if the accounting system is well developed, accounting disclosures would not be expected to be informative to the public because state officials actions could impound that information in prices prior to its release. This environment coupled with growth of unsupported rumors has led the government in December 1996 to threaten taking action against speculators. Some of that speculation was attributed to information leakage through insider trading and personal contacts.

### *Implications of the Two Different Environments*

The most tangible outcome of the differences between the two information environments is the difference in the prices of A and B shares for the same firm as well as the varying degrees of their price volatility. As one observer reports: "The Chinese markets are quite volatile because trading volume is low and because they are dominated by individual speculators often operating without access to the most basic corporate reports or financial statements" (Hansell, 1994). In 1995, the average price of shares traded on the

SSE ranged from a high of US$13.742 to a low of US$6.055 and the turnover rate for that year was 483.6%. For B shares, the average price fluctuation ranged between a high of US$0.482 and a low of US$0.267 and the turnover rate was 58.2% (Shanghai Securities News, January 7, 1996, p. 7).

Relative to A shares, the market for B shares on SSE is small because the high transaction cost of trading in the latter is affordable mainly by institutional investors who tend to hold most of B shares. The total volume of B shares issued over the period from 1992 to 1995 was estimated to be US$1.5 billion. At the end of 1995, the B shares traded on the SSE accounted for 3.64% of total market capitalization. Over the period from 1992 to 1995, the B shares trading ranged from 4.6% to 1.5% of the total volume on SSE. These shares are thinly traded because investors in B shares hold stocks for reasons other than making short-term gains. Thinness of trade deprives analysts from constructing trading profiles that could help in explaining the reasons for pricing A Shares at about one-third to one-fifth of the price of B shares.

As with other developing capital markets, the need to draw capital funds from abroad provided incentive to enhance the markets' international reputation and public image. Preparing financial statements of firms issuing B shares in accordance with IASs is one devise to show that the reported statements are less influenced by state-mandated actions in accounting and auditing or by other bureaucratic management discretion. Consequently, these financial statements can be viewed as providing a relatively more accurate description of the activities of the firms upon which they report. Increasing confidence in the publicly disclosed information about the 70 privatized companies (36 listed on SSE and 34 listed on SEZ) that issued B shares could only increase the likelihood that accounting numbers are utilized by external investors in share pricing. In contrast, firms that did not improve their information structure to the level of adopting IASs, either because of reluctance to incur high cost of conversion to IASs or other reasons, are forbidden from seeking foreign capital. We consider the differences in the information environment noted in the preceding as one of the reasons underlying this segmentation of capital markets. Furthermore, the accounting environment described in Zhang (1996) and Xiang (1998) and summarized above suggests that the relevance, objectivity and consistency of applying domestic accounting standards are of a much lower threshold than what is required by IAS.

These implications lead to the following two hypotheses:

**$H_1$:** Changes in stock prices for the firms issuing B shares are associated with the disclosure of accounting earnings based on IASs.

**$H_2$:** Disclosure of accounting earnings based on domestic accounting procedures has no observable effect on share prices for firms issuing only A shares.

## Preliminary Empirical Analysis

Data on PRC firms have not found their way out of the country in a manner that would facilitate their accessibility to researchers. Even for firms issuing B shares, the data seem to be the province of a few large sophisticated (institutional) traders. In recent years, a Taiwanese consulting firm began collecting published financial information

**Table 1.** Number of Firms Disclosing Public Information Compared to Total Listing

| *Stock exchange types of shares* | *Shanghai* | | *Shenzhan* | |
|---|---|---|---|---|
| | *A* | *B* | *A* | *B* |
| 1993 (not used for analysis) | | | | |
| Total traded | 164 | 28 | 103 | 22 |
| # disclosing | 26 | 4 | 22 | 2 |
| 1994 | | | | |
| Total traded | 164 | 28 | 103 | 22 |
| # disclosing | 109 | 13 | 45 | 8 |
| 1995 | | | | |
| Total traded | 184 | 36 | 127 | 34 |
| # disclosing | 170 | 33 | 120 | 23 |

*Notes:* Type A Shares are sold to local investors only.
Type B Shares are sold to foreign investors only.

(sales and earnings), security prices, and trading volume (in addition to macro data) from PRC publications and all available financial press reports. Using this information and other macro-type data, the consulting firm compiled a data bank for sale to interested investors and businesses. The partners of the consulting firm have granted the National Chengchi University (Taiwan) the right to use the data bank for research purposes only, including this project.

Table 1 shows the number of firms disclosing financial information for the period 1993–1995. The year 1993 has poor data; public information can be found for less than 25% of listed A shares and only for 2% of listed B shares because most were privately placed directly with institutions. For this reason, 1993 is not part of the empirical analysis that follows. By 1995, the listing of both types of shares has almost doubled. For the SSE, 170 of 184 listed companies publicly disclosed performance information; of those companies, 33 also issued B shares. For Shenzhen, 120 of 127 listed companies have publicly disclosed financial performance information in 1995. Of those companies, 23 had issued B shares. Due to data limitations, the empirical analysis that follows is carried out for 1994 and 1995 only.

### *Characteristics of Trade*

Table 2 presents summary information about trading on both the Shanghai and Shenzhen stock exchanges. Panel A shows total volume of trade per year for the period 1993–1995. The highest volume during the period under study was in 1994 when total trade amounted to 812 billion yuans. Less than 2% of the traded volume was due to trading in B shares, which is consistent with the view that foreign institutions invest in B shares for the long-term more so than for profiting from the market's short-term volatility. As a reflection of the speculative era of 1994, the volume of trade in 1995 was only 50% of that in 1994 in spite of the fact that additional firms were added to the listing on both exchanges.

Faced with limited opportunities to diversify their investments, domestic investors rushed to invest in the newly privatized firms, which spurred heavy demand for A shares,

**Table 2.** Statistics Related to Volume and Prices

*Panel A: Trading Volumes for Both the SSE and SEZ (Turnover Volume of A–B Share Markets in China [Billion Yuan])*

| | *1992* | *1993* | *1994* | *1995* |
|---|---|---|---|---|
| Total volume | 68.124 | 366.703 | 812.763 | 411.374 |
| A share volume | 65.016 | 356.237 | 800.308 | 403.585 |
| B share volume | 3.108 | 10.466 | 12.455 | 7.789 |

*Panel B: Comparison of A and B Share Prices for Some Major Companies (Selected Closing Prices of A and B Shares in the SSE on September 2, 1996)*

| | *B share price* | | | |
|---|---|---|---|---|
| *Share company* | *In US$* | *In Yuan* | *A share price in Yuan* | *Price ratio of A to B* |
| Shanghai Vacuum | 0.140 | 1.162 | 4.38 | 3.77 |
| Shanghai No. 2 Textile Machine | 0.106 | 0.879 | 3.85 | 4.37 |
| Shanghai Alkai Chemical | 0.224 | 1.859 | 8.35 | 4.48 |
| Shanghai Heqiao | 0.378 | 3.137 | 13.85 | 4.32 |
| Shanghai Outer Gaoqiao | 0.380 | 3.154 | 17.38 | 5.51 |
| Shanghai Lujiashui | 0.930 | 7.719 | 34.70 | 4.49 |

*Sources:* Zhuoji (1996), Investment Value of B Shares in China, *Lianhe Zaobao* (October 1996).

as can be discerned from Panel B of Table 2, which presents information about six major firms. Converted into yuans, an A share was traded at more than four times the trade value of a B share in the same company. While both A and B shares have inelastic supply, their demand functions differ significantly, and the artificial segmentation of funding sources appears to have given rise to price differentiation in the two different markets. Because of regulatory restraints, domestic investors have limited opportunities to diversify their investments. Domestic savings could not be used to invest in securities other than A shares and the ensuing competition for a limited stock of A shares has led to this price discrimination between the domestic and foreign markets.

### *Estimating the Market Model*

Testing the two hypotheses stated earlier is based on an event-study research design. Given the above description of the information environment, we believed that applying more rigorous research designs could not be justified by the quality of the published financial data or the information system generating those data.

As a first step in generating unexpected returns, we estimated Sharpe's market model. Using all available security prices, daily and weekly rates of return were computed for each stock as in Equation (1):

$$r_{jt} = \log[(p_{jt} + d_{jt})/p_{jt-1}] \tag{1}$$

where $p$ is for closing prices, $d$ is for dividends, $j$ is for the firm, and $t$ is the relevant time period (day for daily and week for weekly). These returns were used to compute two

**Table 3.** Summary of Market Return Betas for 1994 and 1995

| *Stock market share type* | *Shanghai* | | *Shenzhen* | |
|---|---|---|---|---|
| | *A* | *B* | *A* | *B* |
| 1994 | | | | |
| Firms in the sample | 90 | 13 | 34 | 7 |
| Mean daily return betas (standard deviation) | 1.01 (0.24) | 0.87 (0.46) | 0.98 (0.15) | 1.10 (0.53) |
| Mean weekly return betas (standard deviation) | 1.07 (0.23) | 0.80 (0.47) | 1.07 (0.14) | 0.91 (0.39) |
| 1995 | | | | |
| Firms in the sample | 166 | 32 | 117 | 21 |
| Mean daily return betas (standard deviation) | 1.02 (0.17) | 1.04 (1.08) | 1.07 (0.20) | 0.96 (0.62) |
| Firms in the sample | 166 | 21 | 116 | 15 |
| Mean weekly return betas (standard deviation) | 0.97 (0.25) | 0.91 (0.43) | 1.04 (0.24) | 0.45 (0.42) |

market indices: one is equally weighted and the other is value weighted using the capitalized values of outstanding shares as weights. A market index, $r_{\mathrm{mt}}$, was computed separately for A and B shares and for each stock exchange. Rates of returns of all traded shares, including those for which we have prices but do not have the financial reporting information, were used in computing the related market index. Because of the large difference in the price relatives of A and B shares (see Table 1), a different market index was deemed necessary for each type.

Market rates of return were used in various regressions to estimate a market model for each share type on each exchange. For the daily returns, the market model was estimated using 60 days prior to the earnings announcements (from −71 to −10). The corresponding estimation period for the weekly model was −20 to −3. The estimated models took the form of Equation (2):

$$r_{jt} = \alpha_j + \beta_j r_{\mathrm{mt}} + e_{jt} \tag{2}$$

where $\alpha_j$ is the intercept term and $\beta$ is the estimated systematic risk, $e$ is an error term with expectations zero and a variance $s_e^2$.

The market model could not be estimated for all disclosing firms due to missing observations. (After extensive search, it appeared that data were missing either because they were not reported or were not archived.) Table 3 includes the various samples of firms disclosing accounting information and those included in the analysis. The analysis is reported for 1994 and 1995 only since available information for 1993 yielded too small a sample to be useful for estimation.

For all models, $\beta$ estimates are very small and are not statistically significant; this is generally true whether we use equal- or value-weighted rates of return for market indices. By construction, average $\beta$ estimates are expected to approach unity. The number of firms used to construct market return indexes includes all of the listed firms for which price data can be collected, but the empirical analysis is done for the disclosing firms only. For the 1994 data, average $\beta$ values ranged from 0.80 to 1.09. However, the distribution of $\beta$ values for that year suggests a much wider dispersion for B shares than for A shares. The standard deviation of the distribution of estimated $\beta$ for B shares is at least twice as much as that of A shares. A similar pattern is observed

**Table 4.** Beaver's *U* for Equally Weighted Index (1994 Return Data)

| | *Shanghai* | | | | *Shenzhen* | | | |
|---|---|---|---|---|---|---|---|---|
| | *A - Shares* | | *B - Shares* | | *A - Shares* | | *B - Shares* | |
| *Day with respect to announcement* | *Mean* | *(t)* | *Mean* | *(t)* | *Mean* | *(t)* | *Mean* | *(t)* |
| −5 | 2.58 | (2.46)[a] | 1.04 | (0.06) | 1.36 | (0.87) | 0.67 | (−0.66) |
| −4 | 1.71 | (2.33)[a] | 0.53 | (−2.04)[b] | 5.43 | (1.12) | 0.32 | (−5.34) |
| −3 | 3.01 | (2.44)[a] | 1.23 | (0.50) | 1.49 | (0.86) | 0.76 | −0.41 |
| −2 | 1.96 | (2.62)[a] | 0.69 | (−1.0) | 1.56 | (1.45) | 0.70 | (−0.91) |
| −1 | 2.51 | (2.34)[a] | 0.57 | (−1.49) | 1.17 | (0.42) | 0.57 | (−1.58) |
| 0 | 2.31 | (2.09)[b] | 0.26 | (−6.20)[a] | 5.8 | (1.50) | 0.96 | (−0.13) |
| 1 | 1.95 | (2.77)[a] | 0.56 | (−1.80)[b] | 4.34 | (2.29)[a] | 3.72 | (0.82) |
| 2 | 1.46 | (1.88)[b] | 2.75 | (0.99) | 2.19 | (1.45) | 0.20 | (−9.80)[a] |
| 3 | 3.06 | (1.97)[b] | 0.41 | (−3.78) | 1.65 | (1.64) | 0.89 | (0.30) |
| 4 | 2.39 | (1.23) | 1.38 | (0.70) | 6.0 | (1.01) | 3.43 | (1.81) |
| 5 | 1.30 | (1.41) | 0.93 | (−0.21) | 3.77 | (1.11) | 2.42 | (1.00) |
| 6 | 2.30 | (2.20)[a] | 1.37 | (−0.91) | 5.12 | (1.01) | 4.27 | (1.75) |
| 7 | 1.87 | (2.01)[b] | 0.93 | (−0.93) | 1.68 | (1.72) | 3.90 | (0.90) |
| 8 | 1.32 | (1.45) | 1.92 | (0.13) | 1.21 | (0.61) | 1.42 | (0.71) |
| 9 | 1.48 | (1.48) | 0.54 | (−1.83) | 5.11 | 2.28 | 1.05 | (0.14) |

*Notes:* [a]Statistically significant below 0.01.
[b]Statistically significant below 0.05.

for 1995. This is obtained for both daily and weekly estimates. However, the low efficiency of these estimates is largely due to the thinness of trading B shares as indicated earlier.

### Hypotheses Testing

To test the two hypotheses stated above, the estimated $\alpha$ and $\beta$ were used to estimate unexpected rates of return. A window of 32 trading days ($-10$ to $+20$, where 0 is the date of disclosure) was used for daily analysis, and a window of 5 weeks [$-2$ to $+2$] was used for weekly analysis.

The hypotheses being tested are not directional since we did not have a way of unambiguously identifying good and bad news. Thus, we used Beaver's $U$ as a test statistic that does not distinguish between positive and negative reactions but takes account of the variation attributable to good and bad news relative to prior information. For each firm and share type, $U$ statistics were estimated as in Equation (3):

$$U_j = s_j^2(\mathrm{it})/s_j^2(\mathrm{e}) \tag{3}$$

where $s^2$(it) is the average sum-of-squared residuals during the $i$th day of test period (days $-10$ to $+20$), $s^2$(e) is the average sum of the squared residuals during the estimation period, and $j$ is for the $j$th stock.

In the absence of changes in the underlying return-generating process, the expected value of $U$ would be unity. A large deviation of $U$ values from unity implies a structural change consistent with the existence of an earnings announcement effect. A

**Table 5.** Beaver's *U* for Equally Weighted Index for 1995

| | *Shanghai* | | | | *Shenzhen* | | | |
|---|---|---|---|---|---|---|---|---|
| | *A - Shares* | | *B - Shares* | | *A - Shares* | | *B - Shares* | |
| *Day with respect to announcement* | *Mean* | *(t)* | *Mean* | *(t)* | *Mean* | *(t)* | *Mean* | *(t)* |
| −5 | 1.26 | (1.25) | 0.60 | (−4.01)[a] | 2.42 | (1.19) | 1.01 | (0.007) |
| −4 | 1.66 | (1.39) | 0.58 | (−3.51)[a] | 1.52 | (0.88) | 0.14 | (−11.37)[a] |
| −3 | 1.15 | (1.00) | 0.85 | (−0.80) | 0.64 | (−0.82) | 0.54 | (−1.07) |
| −2 | 1.22 | (1.15) | 0.54 | (−4.20)[a] | 1.27 | (0.71) | 0.52 | (−0.95) |
| −1 | 1.49 | (1.89)[b] | 1.36 | (0.83) | 6.90 | (1.24) | 0.04 | (−60.89)[a] |
| 0 | 2.29 | (2.93)[a] | 2.26 | (1.46) | 25.11 | (3.44)[a] | 3.52 | (0.72) |
| +1 | 2.34 | (4.20)[a] | 3.57 | (1.71)[b] | 7.20 | (2.40)[a] | 1.31 | (0.30) |
| +2 | 2.86 | (1.44) | 5.51 | (2.16)[a] | 1.38 | (1.00) | 0.14 | (−14.02)[a] |
| +3 | 1.45 | (1.68)[b] | 4.55 | (1.69)[b] | 1.13 | (0.48) | 2.05 | (0.78) |
| +4 | 0.91 | (−0.76) | 9.27 | (1.50) | 2.88 | (0.84) | 0.46 | (−2.04)[a] |
| +5 | 1.19 | (1.04) | 3.06 | (1.87)[b] | 0.74 | (−0.30) | 3.86 | (0.84) |
| +6 | 0.29 | (−0.59) | 2.01 | (1.18) | 2.89 | (1.34) | 4.20 | (1.15) |
| +7 | 0.98 | (−0.09) | 1.53 | (0.73) | 1.75 | (1.19) | 0.54 | (−1.00) |
| +8 | 0.96 | (−0.20) | 0.38 | (−6.04)[a] | 0.64 | (−1.46) | 3.31 | (0.80) |
| +9 | 0.91 | (−0.55) | 1.27 | (0.81) | 1.51 | (0.94) | 0.48 | (−1.56) |
| Sample size | 168 | – | 32 | – | 120 | | 23 | |

*Notes:* [a]Statistically significant below 0.01.
[b]Statistically significant below 0.05.

significantly smaller *U* also implies a change in structure but one that might be attributed to lack of trading activity in the announcement period. Four portfolios were formed for each day of 1994 and 1995 in the test period. As shown in Table 4, these are: (1) Shanghai A shares; (2) Shanghai B shares; (3) Shenzhen A shares; and (4) Shenzhen B shares.

For each portfolio, the average values of the estimated *U*, denoted $\mu U(A)$, and $\mu U(B)$ for A and B shares, respectively, were tested against unity. The two hypotheses offered earlier can then be restated in operational terms as follows:

**H₁:** $\mu U(B) > 1$

**H₂:** $\mu U(A) = 1$

Tables 4 and 5 report the test results for unexpected daily returns for 1994 and 1995, respectively. For the first hypothesis concerning B shares, $\mu U(B)$ is generally below its expected value of unity for the shares traded on SSE. $\mu U(B)$ is significantly less than 1 for 1994 for trading days −4, 0 and +1. As to B shares traded on SEZ, $\mu U(B)$ is significantly less than unity for day +2. For 1995, also significantly negative average $\mu U(B)$ values are observed for stock trades on SSE for days −5, −4, and −2, and for shares traded on SEZ for days −4, −1, +2, and +4. The only results that appear consistent with the expectations presented in the first hypothesis are observed for B shares that were traded on SSE for post-earnings announcement. However, post-disclosure, positive $\mu U(B)$ values are obtained for B shares on the SSE in 1995 with days +1 and +5 are significant at 0.10, and day +2 significant at 0.01. This positive pattern did not extend to trades on SEZ and

**Table 6.** Beaver's *U* for Weekly Unexpected Rates of Return (for 1995)

| | *A - Shares* | | *B - Shares* | |
|---|---|---|---|---|
| | *Mean* | *Probability* | *Mean* | *Probability* |
| Panel A: Shanghai stock exchanges | | | | |
| −2 weeks | 1.32 | 0.89 | 1.07 | 0.15 |
| −1 week | 0.94 | 0.31 | 1.48 | 0.86 |
| 0: disclosure week | 2.69 | 0.65 | 0.78 | 0.37 |
| + 1 week | 1.05 | 0.12 | 1.48 | 0.167 |
| + 2 weeks | 1.88 | 0.76 | 3.66 | 0.33 |
| Panel B: Shenzhen stock exchanges | | | | |
| −2 weeks | 0.98 | 0.008 | 3.77 | 0.26 |
| −1 week | 0.57 | 0.95 | 1.74 | 0.28 |
| 0: disclosure week | 0.87 | 0.002 | 2.11 | 0.35 |
| + 1 | 1.56 | 0.42 | 1.29 | 0.24 |
| + 2 | 0.99 | 0.015 | 1.04 | 0.64 |

they are not consistent enough to reverse the conclusion that the findings for 1994 and 1995 are inconsistent with $H_1$. Furthermore, the obtained finding of positive daily abnormal returns did not extend to analysis of weekly data as reported in Table 6. As shown in the weekly analysis, none of the average values of $\mu U$(B) on either exchange is significantly different from unity. In general, these results are inconsistent with $H_1$.

In summary, for both exchanges (SSE and SEZ), the evidence does not support the hypothesis that accounting numbers in the relatively better information quality environment (the environment of B shares) are correlated with changes in share prices.

As to the second hypothesis concerning A shares, we find mean values of $U$(A) to be significantly higher than unity using daily unexpected returns for both SSE and SEZ and for 1994 and 1995. For the shares traded on SSE, $\mu U$(A) is significantly higher than one in every day of the period −5 through +3 for 1994, and for the period −1 to +1 for 1995. The results for SEZ show significant positive values $\mu U$(A) on the day +1 for 1994, and on trading days 0 and +1 for 1995. In contrast with 1994, no significant negative values of $\mu U$(A) are obtained for 1995.

The results of analyzing daily trades in A shares do not hold up when weekly returns are examined. For 1995, Table 6 shows significantly positive $\mu U(\mathrm{A})_w$ for weeks 0 and +2 for shares traded on SSE. However, the daily results are opposite of the expected findings for the information environment of A shares and suggest rejecting hypothesis $H_2$.

## Interpretation of Results

The results reported in Tables 4 and 5 do not support either hypothesis. It is counterintuitive to suggest that accounting disclosures have information content in setting security prices for the low quality information environment (of A shares), but not for the high quality information environment (B shares). It is tempting, however, to celebrate and jump to the conclusion that accounting earnings are value relevant in pricing A shares.

Given the previous discussion of the differing information environments, four possible explanation for these findings are suggested:

1. Insider trading in A shares.
2. Thinness of trade in B shares.
3. The high volatility of trading prices.
4. Effects of other information channels.

### *Insider Trading*

Without the necessary ingredients for market efficiency and allowing equal access to information prior to using it in trading, it is not defensible to conclude that the statistical results obtained for A shares are consistent with market efficiency. These results are consistent with several possible reasons because information is reflected in security prices when any trader, including insiders, acts on it. Given the information environment described earlier and the cases reported in Zhang (1996), a scenario can be advanced that insider trading and manipulation of trade by officials might be responsible for impounding accounting information in share prices prior to making public disclosure. Another scenario is that the obtained results are a statistical artifact because (a) the findings about A shares are not consistent across the two stock exchanges (SSE and SEZ), and (b) the obtained results for daily returns are not confirmed by the results of the less noisy weekly returns. Since these explanations cannot be ruled out given this analysis, we are unwilling to conclude that some of the observed findings reflect the reaction to accounting numbers.

### *Thinness of Trade*

The data reported in Table 1 reveal that about 50% to 60% of all listed firms in 1994 disclosed accounting reports to the public, with this percentage increasing to over 90% in 1995, suggesting an improved reporting system. The annual volume of trade (in yuan) for both A and B shares is reported in Table 2. We also know from earlier citation (Shanghai Securities News, SSE, January 7, 1996) that total capitalization of A shares at that time was about 20 times that of B shares. At average currency conversion rates of 1995, this volume amounts to about US$40 billion in 1994 as compared to US$2 billion in December 1995. These two tables present conflicting signals, however, the trading volume presented in Table 2 shows the ratio of A shares to B shares during 1995 to be about 52% and the corresponding ratio in 1994 to be about 65%. Thus, while the number of listed firms has increased in 1995 over 1994, A shares were traded much more heavily in 1995 as compared to 1994. In addition, the SSE publication reports significant variation in turnover rates of A and B shares:

| | Turnover Ratios | |
|---|---|---|
| | Type A | Type B |
| 1994 | 20 | 6 |
| 1995 | 10 | 3.5 |

These ratios reveal the extent to which B shares are thinly traded as compared to A shares. As a result, analysis of the association between unexpected returns and accounting information is not likely to reveal the true information linkage — investors in B shares do not trade for short-term gains.

### *Analysis of Volatility*

A further analysis of thinness of trade and relative market volatility of B shares is examined using relative volume movements. Using volume data, an equally weighted index of changes in the volume of trades, $v_{mt}$, was constructed for each market using all listed shares in a manner analogous to constructing the market return portfolios. And, as in Beaver (1968) and Bamber (1987), a linear function of the following form (Equation [4]) was estimated for each firm in each market:

$$v_{jt} = a_j + b_j v_{mt} + u_{jt} \tag{4}$$

where $v_{jt}$ is the volume of trade for firm $j$ during the trading period $t$, which is a day for the daily analysis and a week for the weekly analysis, $a_j$ is an intercept term, $b_j$ is the slope coefficient reflecting the covariation of the trading volume of the firm and market, $v_{mt}$ is the index of market volume, and $u$ is an error term. This model was estimated for daily and weekly volumes of trade for each share type and each exchange.

Table 7 provides some indication of the pattern of the estimated $b$ coefficients for the firms that disclosed earnings. Using $b$ estimates to denote relative volume volatility, it appears that the volume of trade for the firms disclosing financial information is less volatile than the volume for the market as a whole. Averages of $b$ coefficients are consistently below unity for 1994 and 1995. (The data for the 1993 volume of trade is reported here for comparison only.) The estimated $b$ coefficients show a widely dispersed distribution showing high standard deviations, sometimes as large as the mean (e.g., Table 7, Shanghai Exchange in 1994).

### *Efficiency and Sources of Market Friction*

A likely explanation of the results relates to the operation of capital markets — can we take informational efficiency as a maintained hypothesis? As indicated earlier, unless markets are taken to be informationally efficient, the unexpected variation in market return reflects the joint effect of two hypotheses: market efficiency and information content. Testing for the information content of accounting numbers, or any other news, is contingent on satisfying market efficiency. As indicated earlier in this paper, emerging capital markets are not known to be efficient because of the numerous institutional frictions imposed by regulatory processes and unequal access to information. Some of the institutional features that characterize the PRC's stock exchanges are relevant to this issue.

First, the government remains the majority shareholder, and a sizable percentage of the privatized portions of A shares are owned by state officials, party members and other insiders. Because laws restricting insider trading are not known to be

**Table 7.** Relative Market Volume Volatility

| *Stock market share type* | *Shanghai* | | *Shenzhen* | |
|---|---|---|---|---|
| | *A* | *B* | *A* | *B* |
| 1994 | | | | |
| For daily | | | | |
| Number of firms used | 90 | 14 | 34 | 7 |
| Mean daily betas | 0.54 | 0.59 | 0.75 | 0.93 |
| (standard deviation) | (0.57) | (0.61) | (0.40) | (0.48) |
| For weekly | | | | |
| Number of firms used | 64 | 11 | 17 | 7 |
| Mean volume betas | 0.84 | 0.21 | 0.70 | 0.73 |
| (standard deviation) | (0.78) | (0.07) | (0.35) | (0.56) |
| 1995 | | | | |
| For daily | | | | |
| Number of firms used | 170 | 33 | 120 | 23 |
| Mean daily betas | 1.08 | 0.90 | 1.36 | 0.84 |
| (standard deviation) | (1.254) | (0.654) | (1.74) | (1.85) |
| For weekly | | | | |
| Number of firms used | 170 | 33 | 120 | 23 |
| Mean weekly betas | 0.98 | 0.74 | 1.16 | 1.05 |
| (standard deviation) | (0.402) | (0.74) | (0.88) | (0.44) |

enforced, it is very likely that insiders act on the information prior to its public release and, as a result, the information content of disclosure would have been impounded in prices prior to the public release of annual reports. Second, given that PRC is at the "take off" stage of economic development and growth, which averaged more than 8% a year since 1979 except for 1990 (Fairlamb, 1993, p. 35), financial statements and short-term earnings may not be good indicators or predictors of future performance. The question that appears to be problematic is how to channel the huge pool of local savings that remain liquid into capital markets while keeping the markets orderly and avoiding severe volatility. In 1992, for example, these local savings were estimated at yuan 60 billion in the city of Shanghai alone (Kaye, 1992, p. 50).

Third, the history of trading shares to absentee investors in a public forum and of disclosing information about business firms' performance has been too brief to develop association measures and rules-of-thumb connecting reported numbers and subsequent events.

Fourth, the size of pent-up demand for products in PRC is such that the products of any firm will sell, and given the relative increase in the freedom to set prices, there are expectations of a continued long-term profitability irrespective of short-term profit volatility.

Finally, the novelty of the information and the extent to which pre-disclosure of accounting earnings are issues that need more research and validation.

## Summary

In this paper we address the relevance of the information environment in understanding and interpreting published data about share pricing in the People's Republic of China. Two major stock exchanges opened in Shanghai and Shenzhen in 1990 to trade two types of stocks: A and B shares. The former is to be owned and traded only by citizens, while the latter is to be traded and owned only by foreign investors. Privatization of business in PRC has been growing but the state remains the majority owner; it is estimated that only about 20% of shares in privatized firms are held by private investors.

Although both types are traded on the same exchange, an A-type share is priced at three to four times the price of a B-type share. Because of the institutional arrangements, both types of shares face different demand preferences for investment and liquidity. While this aspect might explain the unusual difference in the prices of A and B shares, we attempt in this paper to examine the varying information environment that appear to characterize the markets for A and B share types. With respect to the A-type shares, several issues are of particular interest: (1) the process of making initial public offering, (2) the role of state officials in share ownership and management of the newly privatized firms, and (3) the structure of the accounting and auditing profession in PRC. While the official requirement is to have financial statements audited, most of the CPAs in PRC are trained under the state-owned and operated system and most of the CPA firms are owned by the government. Accounting standards are issued by a quasi-independent body that is under the jurisdiction of the Ministry of Finance. Few of those standards exist and their implementation is often delayed. Financial statements are issued at most twice a year and are published in the newspapers for public dissemination. In addition, cultural acceptance of independent audits is in its early stage of development.

In contrast, the information environment that characterize B-type shares is distinct by (1) requiring that financial statements be prepared according to IASs, (2) having CPAs who are qualified internationally to audit and offer audit opinions on financial statements, (3) foreign investors, consisting mainly of financial institutions, act as added external monitoring agents, and (4) state officials have little (if any) role to play in stock trading of B shares.

Because of these differences, we posited that A and B share prices react differently to accounting information. The varying elements of the environment discussed for A-type shares led us to hypothesize that accounting numbers are soft description of the underlying economics and would not be associated with security prices as these prices are determined by many other institutional and trade factors. A similar reasoning led us to hypothesize an association between accounting numbers and B-type share prices.

A preliminary analysis of trades on both exchanges in 1994 and 1995 led us to reject both hypotheses. While the evidence could be construed differently by different readers, we would like to point out that the results of daily and weekly return data lead to inconsistent inferences. In particular,

| | In Table 5 | In Table 6 |
|---|---|---|
| Hypothesis 1 | consistent | inconsistent |
| Hypothesis 2 | inconsistent | consistent |

This contradictory pattern led us to question the data quality and the factors that drive price changes. In attempting to explain this pattern, we speculated on the thinness of trading of B-type shares, the role of state officials, the role of insider trading and speculators, and the slow development of accounting and auditing. However, much more work is needed to further our understanding of these issues.

This conclusion is inconsistent with the findings reported by Haw et al. (1998). They find that the Chinese GAAP is more associated with returns than the information reported under the IASs. They even express surprise at their findings, which could fall in the class of anomalies, but they offer those results as exploratory without sufficiently detailed explanation.

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# Communists Among Us in a Market Economy: Accountancy in the People's Republic of China

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**Key Words:** Accounting in China; Integrating accounting reform with micro- and macroeconomic policy; July 1993 accounting reform in China

***Abstract:*** *China is undergoing a unique experience. Its strategy to move the country to a market economy is based on "marketization" instead of "privatization." The state-owned enterprises (SOEs) are intended to continue to be the mainstay of the economy. The recent accounting reform, a 16-point economic stabilization policy, and the decision to maintain the dominance of the SOEs were all promulgated in the same month. To put the recent accounting reform in perspective, four stages in the development of accounting theory since the Communist Revolution are identified. The first stage is Mao Tse-Tung's initial society, where the control function of accounting, in its narrowest sense, was emphasized. The Counter Revolution with the Post-Revisionist Era relaxed, at the macroeconomic level, the notion of control. The third stage of opening up the Chinese economy to outside capital combines allocative techniques, albeit limited, with Western accounting concepts, all blended with Chinese cultural values. The current stage of macroeconomic liberalization of state enterprises, which accompanied a major macroeconomic stabilization program, is a result of a number of demonstration effects that has further exposed the Chinese economy to various outside factors. Accordingly, such recent accounting reform introduces the concept of equity capital, provides a relatively sharper distinction between product cost and period cost, realistically incorporates the capital maintenance concept and allows a limited number of Westernized accounting standards, mostly adapted to accommodate traditional Chinese values. Accounting forms an indispensable component of an overall economic policy.*

Can Communism coexist with a market economy in the same country? The answer seems to be yes in the case of China. What then is the role of accounting theory and practice? Could it be integrated with micro and macroeconomic policies in a coordinated strategy? These seem to be crucial questions, among others, in analyzing China's July 1993 accounting reform. The analysis that follows puts this reform in its historical context by identifying the stages of accounting theory developments since Mao Tse-Tung.

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But the accounting developments in China ought to be viewed in a wider context. China provides an interesting and perhaps a unique experiment in public policy. We are normally accustomed to associate market economy with capitalism. China proved the opposite.

Microeconomics and macroeconomics are presumed by definition to be interrelated. However, as Lester Thoreau, the dean of Massachusetts Institute of Technology points out, microeconomic analysis is based on certain premises which are separate and independent from those tenets upon which macroeconomics is based. In Thoreau's opinion that is a drawback in the development of economic analysis. China's communist regime, with its state-owned enterprises (SOEs) dominating the economy, allowed the authorities to coordinate both microeconomic reforms at the production unit level with a far reaching 16-point state wide macroeconomic stabilization program, both proclaimed in the same month (July 1993). Such reforms also coincided with the Communist Party's decision to move China towards a market economy through 'commercialization' of their policy to continue the SOEs dominance of the economy rather than the path of privatization that was followed by Eastern Europe and the previous Soviet Union. That required a reform in the accounting system, its theory and practices which is the main focus of this paper. Thus in 1993, the year of the rooster in China, "to rise up upon hearing the crow of a rooster," as a Chinese saying goes, three major policies were adopted, the continuance of the SOEs to dominate the economy, the accounting reform to enable mainly the SOEs to compete in a market economy and the 16-point stabilization program making a unique experiment in coordinating both micro and macroeconomic strategies.

It is further interesting to see how the liberalization of economics would eventually lead to freedom in the political arena in China. This is in contrast to the path towards market economy as followed by Eastern Europe and the USSR where introducing democratic structure to politics hoped to energize and free the economic system.

Two themes are merged together in this analysis. The first is that for every economic event there are a number of alternative accounting presentations, measurements, recognition and degree of disclosure. The choice among such alternatives, as defined by the accounting standard setters, depends on the circumstances of the country's adopting a relevant accounting convention and the implications of such option. The choice, therefore, reflects the country's political, economic, social and cultural philosophy. The second theme is the emerging phenomenon of the demonstration effects[1] of the benefits of the success of an economic system with its broad goals and aspirations such as raising productivity and increasing efficiency, etc. (and accounting reflects duplication of aspects of such a system, often with modifications). Such demonstration effects mirror the globalization of business, the increased mobility of factors of production, the economies and the dissemination of information, and the economic opening up of markets. The first theme introduces the diversity of the cultural context of accounting between countries, which arises from different cultural contexts. The second highlights the universal unity of certain basic broad economic and welfare goals. As the two merge together, some uniform goals are identified while the method and the measures to achieve them may still be adapted and modified by culture and tradition. This will be illustrated by the evolution of accounting theory in China.

There is another aspect of Chinese accounting related to the framework of accounting systems. The broad function of accounting in a given society may fall under micro- and

macroeconomic parameters. On the microeconomic side, by identifying and determining the bottom line of profit for each individual firm, accounting serves in a free market economic system as a means of allocation of resources among competing industries and productive economic units. Where social objectives are desirable, such as employment, safety measures, or the kind of contribution of a production unit to society at large, accounting serves to provide indicators to the achievement of social goals; i.e., it is a social performance evaluation yardstick. Application of this concept includes, for example, the requirement of an audited social balance sheet in France and the reporting of social responsibility objectives in some other European countries. Another macroeconomic objective may be to identify and influence the distribution of value added in the community among its constituent providers. This is clearly the major objective of the Swedish value-added financial statements.

In China, the structure of the economy in its output and the means to achieve it is determined through planning. Accounting in the Marxist context formulates a specific philosophy of social productivity and is geared to explain the class struggle in society, the surplus value concept, and the manner of distribution of such value added among labor recipients.

At the microeconomic level, improving productivity at the firm level may be manifested by obtaining more output per unit of input of resources utilized. This entails corporate planning and control functions. The application of the control function in China is particularly interesting. This paper, therefore, divides the developments of accounting in China into four phases: Mao Tse-Tung's initial society (1949 to around mid-1960s), where accounting was characterized by mirroring the Soviet accounting system and a strict control philosophy in accounting, with directions from above, was unquestionably implemented. The Counter Revolution (which was a reaction to and followed the Cultural Revolution) with the Post-Revisionist Era (mid-1960s to early 1980s) relaxed, at the microeconomic level, the notion of control. Some resource reallocation techniques within the Chinese concern were introduced to improve productivity and to lead to an efficient use of resources; but still each concern followed the centralized targets of output. The third stage of opening up the Chinese economy to outsiders (early 1980s to around 1992) combines allocative techniques, albeit limited, with Western accounting concepts. The result is a set of unique accounting conventions with an interesting blend of accrual accounting, which reflects traditional Chinese cultural values, and includes a conservative concept of the accounting realization/recognition principle. This is reflected by the adoption in 1985 of both The Accounting Law and The Accounting Law for Joint Ventures. The current stage of microeconomic liberalization of state enterprises (since 1993) is a result of the demonstration effects of opening up the economy to outside forces and the benefits achieved in the operation of market economies, in addition to the significant inflow of capital from Hong Kong in anticipation of it being acceded to China in 1997. This is reflected in the adoption of the New Business Accounting Standards and the General Rules of Financial Affairs for Enterprises of July 1993 which established a new era of accounting theory developments. The reforms introduce a structure of new financial data from which performance measures are possible to discern. Furthermore, the adoption of the equity capital concept aligns more closely the notion of profit to Western perceptions.

Such accounting reform was an essential part of a coordinated policy including macroeconomic stabilization measures and microeconomic reforms of the SOEs in a

deliberate strategy to move China towards market economy and still maintain the dominance of the SOEs.

## THE POLITICAL ECONOMY STAGES OF DEVELOPMENT OF COMMUNIST CHINESE ACCOUNTING THEORY

In dividing the Chinese developments in accounting into four phases, the following factors were considered. First, there is an association among economic policies, political philosophy and accounting conventions. But the association is not clear, nor is it easy to imply the causal relationship. The political policies of a managed economy may be expressed in the goals and structure of an economic plan; accounting serves to see that its implementation is on target. In China, it may be possible to deduce that a similar causal relationship took place shortly after Mao Tse-Tung came to power. Second, the degree of success of an economic plan may modify political policies. The relaxation of central control introduced by Liu Shaogi, Mao's deputy just before the Cultural Revolution (of 1966 to 1976) may be an example of the causal influence of economics on politics. And again accounting policies and practices invariably reflect that, as is suggested to be the case in the second phase of the Post-Revisionist Era. Therefore, dividing the development in accounting into stages may not necessarily follow and reflect the political movements by themselves, nor the economic developments in isolation of politics. Furthermore, it is no coincidence that both the recent accounting reform, and the government 16-point stabilization program that encompasses wide liberalization measures in the fiscal, financial, and macroeconomic policies, were announced on the same day, 16 July 1993.

Identifying the stages of development in Chinese accounting theory in this paper is based on the predominant factors which were primarily economic and secondarily political (e.g., the second stage of the Post-Revisionist Era, where managers of state-owned enterprises were allowed limited flexibility in the allocation of resources within their enterprises and some incentives to raise productivity were introduced).

Some difficulties arose when translating accounting concepts from the Chinese language as sometimes there is no perfect Western expression for them. For example, the Chinese principle of "actuality" in the accounting regulations for joint ventures of 1985 regarding the treatment of "bad debt" (before its revision in 1993) is used in China to reflect the non-admissibility of establishing an allowance for bad debt: bad debt is expensed only when it is established that it cannot be collected. Perhaps actuality reflects Chinese culture. It may be argued that it is equivalent to the concept of conservatism and could be translated as such. But it has a subtly different meaning. Conservatism, a principle of accounting in the US, but not an accounting convention in the U.K. due to the ruling in the Royal Mail case in the early years of this century, may be argued as follows. Accounting follows conventions that allow choices among modes of presentation, recognition, and, one may add the societal approach to define "realization." Therefore, if in doubt one takes the more conservative expression in order to be on the safe side and not to mislead the public. In China, it has a different meaning so far as the timing of "when" income is realized as will be explained later.

The Hegelian notion of change, which formed, in part, the foundation of the dialectical materialism approach by Karl Marx regarding class struggle, implies that at a given

*moment* in time changes take place. For example, water becomes a gas at 100° , but not above and not below that degree. But the process of human change in social relationships is usually a gradual one and accounting, in my view, is a social science. Hence, the stages of accounting theory, as suggested in this paper, overlap each other. If certain dates are given here, they are for convenience sake.

## First Stage — The Mao Tse-Tung Initial Society (1949 to Around Mid-1960s)

In the first stage of accounting development in China, the Soviet accounting model provided important guidelines for economic planning for the new Maoist regime. The emphasis of the first 5-year plan (1953–1957) was focused on implementing centralized control and planning; accounting served basically to see to that by emphasizing achieving plan's goals regardless of cost.

According to the Marxian philosophy, in a capitalist society, surplus value, derived from unpaid surplus labor, is pumped out of the direct producers who are the laborers. The extraction of surplus value under the capitalist mode of production is partly consumed by the capitalists and partly accumulated as capital. Furthermore, because the worker apparently exchanges labor for other commodities, exploitation is thus obscured by a lack of understanding of the production mechanism. It is in this sense that Marx charged accounting as supporting a particular form of political ideology and so determining the relation of domination of capitalists over labor.

In China, Marxist political economics had a deep influence on shaping the nations' political and economic developments, especially the intertwined relation between "social productivity" by indicating what the country's central authority considers to be the best economic plan for society, and "production relationship," mainly between labor and state. It has been the top leaders' belief that a certain level of social productivity can only be achieved by a correspondence of production relationship under a particular type of social constitution.

Furthermore, they considered the concept of national income to correspond to value added by labor. Derived from the value-added concept is the "fund management basis" of the state's uniform accounting system. The purpose of fund management accounting is to differentiate the value of the total social product from the value added by labor, with the difference being considered as a fund for future investments. The identification within the fund accounting systems of special funds for specific purposes was prevalent in the socialist financial accounting system in the first phase of accounting development in Mao's China.

The collective economy, which was characterized by egalitarianism in the distribution of income, resulted in enterprises and workers "eating from the same big pot" of the state. This phenomenon explains Mao's China downplaying the role of Western accounting. Production plans were handed down to enterprises by the government that also made the decisions as to production quotas, materials and labor distribution and other parameters. Wage levels or rewards were determined by a rigid wage system such as "years of service" and "quotas for promotion available" rather than by working performance.

The socialist planned economy in China, which has been moving progressively to a quasi-market economy, has three types of economies — namely, state, collective and

individual. The state economy, which comprises state-owned enterprises (SOEs), is owned by the whole people at large. It has been the mainstay of the national economy in the first stage, and in 1978 accounted for 78% of total value of the gross national product but only 74% in 1985 (World Bank, 1992, p. 54). By 1992, the share of such SOEs had declined to only 48% of industrial production (Rawski, 1994, p. 272). China presents the unusual picture of an economy that is making a "transition to a primarily market economy, but in which publicly owned enterprises still produce the bulk of manufacturing output." (Naughton, 1994, p. 266). It is remarkable that the movement to market economy in China is through "*marketization instead of privatization*" (World Bank, 1992, p. 66). This is in contrast to East European countries and the former USSR where privatization characterizes the transition to a market economy. The collective economy is in the form of various cooperatives owned by rural township and village enterprises (TVEs). Individuals are allowed to operate their own businesses as the third type of economy; these businesses are principally small-scale (World Bank, 1996a, p. 51). Collective and individual forms of ownership have been the most rapidly growing segments of Chinese industry and commerce. Between 1978 and 1992, the former rose from 22% to 38% and the latter form a negligible percentage to 7%. The remaining 4% of industrial production in 1992 was contributed by foreign-in-vested enterprises.

The Chinese state enterprises, until the 1993 accounting reform, used fund accounting, which in Western economies is prominent mainly in governmental accounting. In the US funds are classified into three broad types: governmental funds, proprietary funds, and fiduciary funds. On close examination, the accounting statements of Chinese state enterprises possess some characteristics of the proprietary funds of US governmental (state and local) accounting. For example, limited elements of the accrual basis of accounting are used, but unlike governmental funds, depreciation of fixed assets is recorded in the accounts of proprietary funds. Another distinguishing difference is the presentation of "fund sources" and "fund applications" in the balance sheet of Chinese accounting. However, here no transfer is allowed between the various components of funds, nor between various funds. Fund accounting, in the first stage, serves as a narrowly defined control tool.

Certain political developments at the end of this first stage led to the modification of the control concept in accounting. The second 5-year plan (1958–1962) was disrupted by a new social campaign, the Great Leap Forward, and a violent political power struggle among top leaders.

The Great Leap Forward, initiated in 1957, reached its peak in 1961. It was aimed at accelerating social movement toward a purer communist system. Relations with the USSR had deteriorated. China believed that it could go it alone. Its thrust was to push the nation's economy through motivation of the masses to set up their own factories: "the triumph of native make-do-and-mend over scientific techniques" (Pan, 1988, p. 21). The attainment of this goal was focused on motivations by ideology, such as love of country and love of communism. The playing down of the basic needs of the laboring masses contributed to the demise of this campaign in the 1960s. One striking example was the "backyard furnaces which consumed all the coal but produced unusable steel. The very existence of industry was at stake, as over-extended machines ground to a halt and whole factories closed down." (Pan, 1988, p. 21).

At the same time, there was a bitter controversy among top leaders over what should constitute the nation's priority. Governing authorities, led by Mao Tse-Tung, maintained that undertaking class struggle should be the primary mission in order to adjust the social structure. Another faction, the "Capitalist Roader," led by Liu Shaoqi, maintained that social structure already reflected the desired relationship. This faction held that it was imperative for China to start engaging in mass production of commodities and promoting the improvement of the lagging productivity. Liu, who was in charge between 1960 and 1964, initiated a number of economic liberalization measures.[2] Mao, opposing this policy, eventually rejected such Yugoslavian-style market socialism. Mao prevailed and thereafter adjusting the structure of society dominated the institutional development while economic development stagnated. Another movement by the "Gang of Four," which included Mao's wife Jiang Qing, aimed at reforming the Communist economic system. "Let a hundred flowers bloom, let a hundred schools of thought contend," formed a political movement which began in May 1957, was the cry of the same intelligentsia who were critical of Mao. The subsequent Cultural Revolution (1966 to 1976), reflecting Mao's objective, had as its purpose to counteract the aforementioned liberal tendencies of reform groups. It reiterated the necessity of eliminating class contradictions but overlooked the importance of economic development.

The "Capitalist Roader," "Gang of Four," and the "Hundred Flowers Bloom" movements were critical of the economic policy of the Communist party and pointed to the need for economic reform. In summary, the first stage in the development of accounting theory was dominated by planning China's social productivity and distribution, with accounting acting as a strict control instrument. At the end of this stage, various political movements expressed dissatisfaction with the pace and/or direction of economic development which in turn led to modifications to improve productivity, and the main thrust of the second stage was to gradually introduce such modification and a part relaxation of the notion of control in the accounting system.

## Second Stage — The Post-Revisionist Era and the Counter Revolution (Mid-1960s to Early 1980s)

In the early years of this stage several uniform accounting systems and regulations were promulgated. Owing to the political disorientation, however, the role of accounting had never been properly appreciated. "The State Planning, Economic, and Capital Construction Commissions, and the Statistical and Price Bureaus, were merged and reduced to a skeleton staff. Overt concern for production, economic efficiency or profitability was condemned. Management was largely taken over by "revolutionary committees," and (for practical as well as ideological reasons) economic and administrative units at all levels sought self-sufficiency" (World Bank, 1983, p. 46).

At the same time, a number of political economic movements took place within the Cultural Revolution (1966 to 1976) aiming to implement some changes, such as "self-reliance independence." The purpose of this self-reliance campaign was to encourage full domestic production of Chinese needs and not to rely on imports. Also "People's Communes," which combined families or teams into communes, were created to make possible the gathering of needed equipment for large-scale produc-

tion. The effect of these movements actually addressed to the need for both political and economic reforms. The result entailed a modification of the notion of control in accounting into a wider context, whereby some degree of the efficient use of resources was possible. Still at this stage broad controls continued to be directed from central authorities. In economics, investment priorities were modified in 1978. There followed a shift from heavy to light industry, the latter being labor-intensive therefore combating a state of high unemployment which existed at that time.

The liberalization of the concept of control in accounting took a variety of forms. Within centralized targets, a greater degree of freedom was given to managers of state industry concerns. For example, managers were allowed to retain part of the profit of their concerns to expand production and pay bonuses to employees; extra goods produced above state plans' targets were allowed to be sold to market or were directed towards export trade where part of the foreign exchange earnings could be retained in the relevant concern to improve technology. While bonuses to employees were introduced, managers now had the right to fire employees (although that right was to be exercised cautiously).

A major innovation for SOEs, namely the "contract responsibility system," was introduced in the early 1980s (Singh, 1992, pp. 70–81). Government contracted with each individual SOE establishing performance targets and specified incentives to achieve or exceed these targets. However, each contract was based on a case by case negotiation and specification, with no common policy among regions (as contracts were prepared according to local regulations), or sectors or firms within each sector. Furthermore, enterprises' tax, profit allocation and remittances, and loan repayment obligations were part of the negotiation. But as each contract was negotiated for three years and the emphasis seemed to be on the short-term profit, therefore annual investment targets were included in the enterprise-specific contract. Moreover, in the initial Mao Tse-Tung initial society SOEs were obligated to market their product under the Ministry of Commerce network of wholesale and retail outlets at controlled prices. With the innovations in the second stage of accounting development, SOEs were free, if they wished, to sell their excess supplies, i.e., above contract targets, outside such marketing structure at the higher prices existing in the "free" market.

The rewards to managers and the possibility of establishing bonuses (including bonuses for labor) resulting from exceeding specific quantitative targets (mainly targets of gross profit) allowed managers a degree of maneuverability to improve efficiency and a limited scope to allocate inputs within a given SOE; and accounting became a slightly more than a central government control measure.

However, the contract responsibility system has a number of drawbacks. Because quantitative targets, especially gross profit targets were fixed, while input prices to supplies, and product prices were set by the central authorities in a complex way, "under such conditions, input supplies and prices often deviate(d) significantly from those implied in gross profits and other quantitative specifications" (Singh, 1992, p. 72).

It is also interesting that in 1986 China introduced a bankruptcy law for concerns with financial difficulties (the first bankrupt concern was declared in the northeastern city of Shenyang). Managers who turned a losing business into a profitable one were idealized as heros and recognized with the *Wanyuanhu* (the 10,000-Yuam peasant household) (Pan, 1988, pp. 49–54). The *Wanyuanhu* is a list of those honored in China and equivalent to Hall of Fame in American sports.

These measures and others meant coloring the concept of "control" in accounting in a manner allowing economizing in the use of production inputs and formed the second stage of the development of accounting in China.

### Third Stage — Opening Up of the Chinese Economy to Outside Capital (Early 1980s to Around 1992)

The end of the Cultural Revolution marks the beginning of the third stage of accounting development and was followed by the opening up of the Chinese economy to outside capital. In the 1980s, foreign goods became available in China. The rulers, too, had become more aware of foreign technology. The ensuing demonstration effects and the need to modernize the economy had led to this open-door policy. This culminated in the promulgation of the Accountancy Law for Joint Ventures. To attract foreign capital, a new accounting theory emerged. Accounting conventions and principles in the Accountancy Law for Joint Ventures fused western accounting theory with Chinese cultural philosophy. This provided a unique theoretical framework with a special nationalistic accrual accounting and a special notion of revenue recognition/realization unique to Chinese cultural philosophy.

One can summarize the broad framework of accounting for joint ventures in China. The broad concept of the accrual basis is followed with exceptions that reflect the institutional structure for China. Bad debt is only recognized by the direct write-off method at the time it is proven (or discovered), as an application of what the Chinese called the principle of "actuality" in the Accounting Law. The inadmissibility of applying the lower of market and cost in inventory valuation may be explained by the unique dual pricing system in China: government controlled prices and market determined prices, which have a wide disparity for the same commodity.[3] The dual pricing systems make the identification of appropriate current value of inventory difficult. Furthermore, while the foreign exchange rate in China fluctuates notably, the Joint Venture Accounting Regulations stipulate the use of two exchange rates depending on whether a given event or transaction results in an increase or a decrease in the relevant balance sheet or income statement accounts. The "recording exchange rate," i.e., the spot rate, is to be used for an increase, while the "book exchange rate," i.e., the historical rate at time of the initial transactions, for a decrease in the relevant balances. Presumably, the "currency translation difference" is to be entered in the equity section of the balance sheet and acts as a fluctuating balance of unrealized results. This seems not to be in line with the Chinese principle of Actuality as discerned in The Accounting Law. The non-amortization of goodwill in joint ventures in China might be considered a variation on the way the Germans and French treat "the consolidated difference" (as a balancing item to reflect from year to year the performance of the subsidiary when financial statements are consolidated). Lastly, confining the recognition of certain expenditures to those incurred in China, particularly for research and development undertaken by joint ventures, reflects a nationalistic outlook to accounting performance.

In sum, the accounting theory in China in the third stage embraces a specific shade of accrual accounting with a twist in defining recognition and realization of income and costs as it really occurred within China's nationalistic borders. And while there are undoubtedly some reservations on the Chinese accounting conventions applied to joint ventures, this accounting policy in conjunction with the other economic measures taken at the time

seems to be successful in attracting foreign investment to China. Foreign direct investment, measured in US dollars, rose form US$916 million in 1983 to about US$27.771 billion in 1993 (World Bank, 1995, table 13.5).

### Fourth Stage — Microeconomic Liberalization of State Enterprises (Since 1993)

A number of factors that developed in the recent past led to a movement to liberalize the domestic economy in order to raise productivity and efficiency. The new accounting standards, effective from July 1993, reflect that by introducing measures to identify more clearly some accounting parameters that are capable of giving signals to efficiency and productivity at the microeconomic level of SOEs and also by allowing outside users of financial statements to assess more accurately their performance.

Such accounting reform is a logical progression in the development of accounting theory and practice from control, to the introduction of incentives, to formulating an improved accounting system for joint ventures, and now to reforming the SOEs. Furthermore, the accounting reform is a natural component in a carefully planned integration of micro- and macroeconomic measures intended to move China towards a market economy.

The strategy was deliberately implemented via a "marketization" rather than privatization. In November 1993, the same year the accounting reform was introduced, the CCP adopted the principle of "socialized market economy," thus making the SOEs the mainstay in a market economy. Therefore, SOEs efficiency in a competitive market place was an essential ingredient for the success of such a policy. China's decision to reduce the subsidization by the Central government of the SOEs (World Bank, 1990, p. 41) was part of a broader set of fiscal measures geared towards a more budgetary reform. Over a few years before the accounting reform, the central government devolved some responsibilities to local governments. Furthermore, the economy was heating up, being subjected to the growth/inflation phenomenon, typically a phase in the movement from 'directed' towards 'market' economies. It was not surprising then that at the urge of the World Bank and the International Monetary Fund, China adopted a 16-point program of economic stabilization measures (Appendix B) in the same month that the accounting reform was promulgated. However, the demonstration effects arising from opening up the Chinese economy to outside influences might be argued as the force that triggered such a coordinated set of measures.

More details of SOEs subsidization, and of the "demonstration" effects follow.

SOEs deficit as percentage of China's gross domestic product (GDP) continued to rise from 8.3 in 1988 to a record high of 10.5 in 1992, then sharply declined to 7.0 in 1995; it reached 10.3 at the time of introducing the accounting reform of 1993. That was also a time when government revenue showed a declining trend as a share of GDP and the authorities desired to keep budgetary deficits in check (World Bank, 1996b, p. 11).

The issue of state subsidization of the SOEs reflects the inefficient operation of many state enterprises which in 1995 accounted for 34% of industrial output but used up 73.5% of industrial investment. Furthermore, both their industrial growth and value added per worker were about half non-state enterprises. In addition, SOEs after tax profits as percentage of fixed assets declined from about 23% in 1978 to 5% in 1994, and "in the first three quarters of 1995, for example, loss-making enterprises accounted for 20.8% of

industrial state enterprise production, 18% of sales revenue, but 41% employees" (World Bank, 1996b, pp. 15–17).

In addition, the decentralization process which took place in the 1980s involved various actors in "all spheres of economic activity: to enterprises in making production and marketing decisions; to foreign trade corporations in selection of export products; to farmers in selecting crops; and most import to individuals, to a large extent with respect to purchases, though to a much lesser extent with respect to employment" (World Bank, 1992, p. 40). Therefore, the nature of the relationship between SOEs and the central authorities altered (e.g., to cause the state enterprises to become self-financing and thereby reduce subsidization). But on the other hand and at the same time, the State became, with workers and local government, the new owners with specified equities. This is despite the fact that property rights remain vague as there is obviously a need to separate the role of government as owner, manager and regulator of SOEs.

Concurrently, one can argue that at the hub of it all are the demonstration effects arising from the opening up of the Chinese economy to world economic forces.

China has become a member in the World Bank Group and the latter has allocated a significant and an increasing amount of Bank loans to China. Moreover, a World Bank resident mission was established in Beijing. World Bank loan proposals require for their consideration the use of special accounting jargon (many of them are westernized, e.g., the use of shadow and accounting prices and of economic rather than financial rate of return ... etc.) In addition, typically most World Bank loan covenants stipulate the development of institutional, financial and accounting improvements as conditions for loan agreement effectiveness and for their dispersement.

But the main thrust for the development of the new accounting standards may be the demonstration effects that come about from World Bank projects, the foreign investment industries that were established following the implementation of the Accounting Law for Joint Ventures in 1985, the increasing number of Chinese students studying abroad in the late 1980s and early 1990s and their exposure to the free market economies' benefits with the tenets of an affluent society dominated by freedom of choice and supremacy of conspicuous consumption. The prospect of Hong Kong belonging to China in 1997 and the enormous amount of Hong Kong money that currently flows in to establish industries on the Mainland hastened that accounting reform.

## The Analysis of the 1993 Accounting Reform

The July 1993 *New Business Accounting Standards and The General Rules of Financial Affairs for Enterprises* introduce new innovations to state enterprises accounting systems (Lin, 1994). These are detailed below and are followed by synthesizing them to elucidate their implications to liberalize the domestic economy.

### *Clearer Distinction between Product and Period Costs*

Valuation of inventory before the reform of 1993 includes in addition to product cost as defined in Western accounting conventions, also the capitalization of administrative expenses in such product costs. These administrative expenses included interest expense

related to the financing of fixed assets and, where relevant, any gains or losses from foreign currency transactions/translations. The effect is that state enterprises, if operating at lower than full capacity, incur, using Western accounting conventions, real losses larger than those reported by State Enterprises. Furthermore, the resulting hidden losses are accentuated by the fact that inventory is measured only by its original "historical" cost and no allowance is made if market forces decrease the inventory value. In other words, if production increases, but no sales are made, there would not be any losses recognized at all. Carrying costs are capitalized in the valuation of inventory, and even if the cause of the accumulation of inventories is that there is no demand for the product which is manufactured, or a weakening in that demand, it follows that no losses would be recognized, nor any signals are observed to identify signs of deterioration in performance, as inventories are carried at cost regardless. Having a difference between cost and revenue (surplus or deficit) is in itself a measure of performance evaluation. The old system, therefore, equates production with sales. In a sense, this does not provide any appropriate performance measure that may lead to either microeconomic reallocation of resources, or form a basis for determining and enforcing macroeconomic discipline that promotes higher productivity. Furthermore, the social value added, as determined by the authorities, is observed by the degree of achievement of specific production targets regardless of efficiency consideration.

The new standards minimize the extent of the resulting hidden losses by considering interest expense and gains or losses from foreign currency transactions/translations in non-inventory costs, i.e., as period costs.

### *Depreciation*

Prior to July 1993 the Government established the depreciation methods to be used in various industries and determined the useful life of fixed assets. While these may theoretically be altered by getting permission from the Ministry of Finance, in practice, it was almost impossible to do so. Useful lives were very long and the amount of accumulated depreciation could hardly be sufficient to replace machinery when it was retired. This would also, in non-scientific accounting concepts, hinder more strongly even the replacement of fixed assets by more technologically advanced, even more expensive methods. Furthermore, inherent in this method is the clear overestimation of the surplus resulting from operations. In addition, the method used by debiting accumulated depreciation to the balance of the account called "Fixed Asset Renewal Fund" reduces the "Public Fixed Asset" fund on the resources side of the specific state enterprise, and that does not contribute any meaningful measure capable of signaling ineffectiveness in using resources. It should be noted that 'fund' as used in China is not a source of funding but is used to indicate a resource rationing device, i.e., a budgetary tool. It is merely a form of account designation.

With the reform Act, useful lives of fixed assets were shortened and were set to a more practical levels, for example, between 10 and 14 years for ordinary machinery, 6 to 12 years for transportation vehicles, 4 to 10 years for computers and 30 to 40 years for factory buildings. Furthermore, for specific industries, which the authorities can give higher priority, accelerated depreciation methods (double declining balance and sum-of-the-digits) were allowed.

The new act also considered depreciation to be a "cost," in contrast to the prior reform period where, in most cases, depreciation amounted to a de facto revenue to the Government.

### *The Equity Capital System and the Concept of Capital Maintenance*

Under the Fund System, where Government provides state enterprises with their "Public Asset Fund," no provision was made for the application of the "Capital Maintenance Concept" to determine the true picture of profit/loss (or surplus/deficit). The Public Fixed Asset fund is on one hand reduced by depreciation or by a loss of an asset (e.g., by fire). On the other hand, a rise in government prices of a raw material would increase the value of that Public Asset Fund.

Another complication arose in 1992 when the Government stipulated that operating losses, as well as overspending on employee benefits would *not* reduce the Public Asset Fund, but have to be absorbed by the Enterprise within three years. How could that be done when prices are fixed by Government, and expenditures in the various funds have to be spent and no transfer between funds is allowed? Probably the items involved would at least in theory be met through a reduction from the same allocation in future years.

Furthermore, as no more than 11% of the overspending on the "Employee Benefit Fund" is allowed to be written off as cost, the unrecognized balance is really a loss. Therefore, Government taxation is being overestimated and accumulated depreciation funds are not sufficient to replace relevant fixed assets. That clearly violates the tenets of the capital maintenance concept as even if the system is reformed to identify a surplus (or a deficit), such surplus will be overly overestimated as it would include a part repayment of the initial capital (or investment).

The new Act established the Equity Capital concept. The equity capital is established from the provisions of Government funds, corporate investments and/or subscription by shareholders. This seems to be unusual as capital maintenance concept applies to private property ownership in Western economies, but is introduced in China for SOEs to reflect China's desire in its decentralization as part of the "marketization process" to reduce state subsidization. The effect is not only to establish a net worth concept in Government Enterprises, but it also now requires depreciation expenses, losses of fixed assets and decreases in the value of inventories to be charged against earnings and not against capital funds. Furthermore, the unrecognized portion of the excess of employee benefits above 11% of its overspending may now be charged against any specific reserves appropriated from what in reality amounts to the retained earning side, such as, e.g., the "capital construction fund" established from the retained "surplus." This comes very near to identifying profit as the surplus/deficit over and above the initial investment.

### *Flexibility of Transfers among Funds*

Prior to the reform, capital investment from Government was divided into "Fixed Asset Fund" and "Current Asset Fund." No transfer was allowed between various funds and various functions.

Accumulated depreciation was used in reality as government revenue. But officially the amount of the accumulated depreciation was used to replace fixed assets as well as to carry out heavy repairs.

The surplus after taxes and fees (whose structure was notably modified and its rates reduced in the reform) were divided into:

a. fund for operating asset;
b. fund for new product testing;
c. fund for emergency;
d. fund for employee bonus; and
e. fund for employee benefits (e.g., expenses on housing).

The Reform requires now that part of the retained earnings (if we rename the ensuing surplus) may be used for:

a. legal reserve;
b. public welfare reserve; and
c. any other reserve established by the Enterprise if it so desires.

"Despite numerous initiatives in enterprise reform, SOEs are still obligated by government policy to bear the social burden of supporting an excessive work force by keeping redundant workers on their payroll. In addition, SOEs also provide a number of services (including housing, health care, child care and schooling) regarded as public goods in most other countries." (World Bank, 1995, p. 35).

With the expectation of the public welfare reserve, which may be argued as being in reality an expense, the Reform makes clearer the distinction between the "cost" incurred to generate the revenue before recognizing a profit and any subsequent distribution (or use) of profit.

### *The Principle of Conservatism*

The Act established this concept and it is yet to be observed how it is being implemented, but certain aspects are already established. These include for the first time allowing the application of lower of cost or market (LCM) for inventory valuation, although this provision is limited to Enterprises that issue stocks abroad. I believe that as of early 1994, there are about 20 such Enterprises.

Furthermore, an allowance for bad debt is now permitted under certain stipulations and is considered as current expense.

### *Concluding Comments on the State Enterprises' Accounting Reform*

The new accounting convention for state enterprises introduces the concept of equity capital, provides a relatively sharper distinction between product cost and period cost, and realistically introduces a concept that is fairly similar to the Western notion of the capital maintenance concept, and allows a number of Westernized standards reflecting aspects of the principle of conservatism. The result would be to allow state enterprises to accumulate accounting data that can provide signals to how economic resources are allocated within the microeconomic enterprises, and if so required, could contribute to a rational resource allocation at the macroeconomic level. Hence,

productivity and efficiency measures could play their role in what amounts to a de facto movement towards a kind of quasi-market economy or at least a revised progressive control economy.

While the 16-point stabilization program of 1993 tackles the macroeconomic policy measures (Appendix B), the accounting reform supplements such measures by addressing some of the inefficiencies at the microeconomic environment level of SOEs. The SOEs represent the major contributor to the Chinese gross domestic product and Chinese gross capital formation (the latter amounted to 717 billion yuan out of 1245.8 billion yuan for the whole economy in 1993 (World Bank, 1995, pp. 211–212).

## CONCLUSIONS

There is a close link between political philosophy and its impact on economic goals, structure and growth. Accounting provides the indices and parameters to appraise such a relationship. Mao Tse-Tung's revolution changed the social fiber of society in China to one that redefined social productivity and the measures to create and distribute it. It was natural, therefore, to implement the new and radical philosophy by interpreting its tenets in a strict manner. In accounting this was reflected in establishing narrow boundaries to the concept of control and implementing it in a bureaucratic way. After all it is alleged that bureaucracy was invented in China. It was the fifth Han Emperor Wu, reigned from the year 147 BC who made *The Analects* of Confucius the cornerstone, of Chinese government; hence bureaucracy was created. Unfortunately, as it developed and was reinterpreted later on in history, Confucian humanism was deprived from its humanity to become the most rigid form of bureaucracy in the world.

The events that led to the Cultural Revolution reflect, to a notable extent, the coming to the forefront of special groups goals' and parochial interest. However, one can argue that these developments mirrored elements of dissatisfaction with the ensuing productivity growth in China. There was a need to redirect and perhaps question the way the Communist philosophy was put into practice. Indeed the Chinese Communists dismissed Confucius as relic of the imperial past, and that was particularly evident during the Cultural Revolution (although despite these efforts Confucius' teachings continue to influence Chinese culture). Still, within the centralized Communist social productivity goals, some efforts were made to economize the use of production inputs. The concept of control was more liberally interpreted, albeit with direction from above.

The quest to improve productivity points to the availability of alternatives. The existence of alternatives implies the need to choose between them. The effort to attract foreign external capital and focus on profits from the point of view of foreign financiers brought about the formulation of a new accounting criteria that fused Western economic philosophy with Chinese objectives; hence the promulgation of "The Accounting Law for Joint Ventures" and the extension of accounting reform to state enterprises in July 1993. Accordingly, accounting formulated a new kind of the revenue recognition/realization concept, i.e., a modified accrual system of accounting, and the introduction

of the equity capital concept. The ensuing accounting theory with its new parameters was aimed to both help foreign investments to be evaluated by their providers and at the same time to satisfy the Chinese objectives. The globalization of the World economy with its demonstration effects are the basis with which China is now introducing a number of westernized accounting conventions, such as the equity capital notion, which can provide appropriate signals for national decision making. The new reform allows the introduction of microeconomic liberalization and could lead to eventual macroeconomic discipline based on reallocation of resources in the economy to achieve higher productivity.

But liberal political philosophy and economics go hand in hand. In the USSR, it was the political freedom that was introduced in order to achieve economic development. The reverse is taking place in China: the economic reforms led to demand for political democracy. The events in Tienanmen Square, where freedom was harshly crushed, did not really subvert the potential thirst for democracy and freedom of choice. If the economic reforms that aim to raise productivity and the new Chinese accounting theory that reflects and enhances such reforms are to continue, there would undoubtedly be a modification in the political philosophy that is embraced in China. This does not mean necessarily dropping Communism but reforming and modifying its core.

But perhaps the most intriguing feature of the accounting developments in China is its response to political pressures to improve economic conditions (and one may argue that it also influenced in a small part political philosophy?), and the accounting integration with micro- and macroeconomic policies.

Such integration was the mainstay in China's strategy to move the country towards a market economy still dominated by state enterprises, rather than following the traditional path of privatization. Furthermore, such interdisciplinary approach to problems, in the scope implemented in China, may be an important phase in yet another integration of various sciences since perhaps the timid attempt, shortly after the Second World War, to integrate economics with sociology and political science in studies dealing with "economic development." No man is an island.

## APPENDIX A

### Glossary[4]

*Confucianism:* System of ethics based on the teachings of Kongfuzi (tr. 551 – 479 BC), who held that man would be in harmony with the universe if he behaved with righteousness and restraint, and adhered properly to specific social roles. With its emphasis on the study of the Classics, the worship of ancestors, and the submission to authority, Confucianism formed the dominant ethic of Chinese social units from the imperial government to the peasant family.

*Cultural Revolution:* Complex social upheaval that began as a struggle between Mao Tse-Tung and other top party leaders for dominance of the CCP and went on to affect all of China with its call for "continuing revolution." Dates for the movement are usually given as 1966 to 1976.

*Deng Xiaoping:* [Dung Shee-ow-ping] (1904–1997) Son of a Siochuanese peasant family, he joined the Communist party while on a work-study program in France in the 1920s. A veteran of the Long March,

Deng rose to high positions in the Central Committee during the 1950s and early 1960s, and returned to power after a period of persecution during the Cultural Revolution, replacing Hua Guofeng as premier in 1980. He was instrumental in implementing the Four Modernizations, and crushing the 1989 democracy protests. He died in 1997.

*Four Books:* Analects (sayings of Confucius [*Lun Yu*]), Mencius [*Mengzi*], The Doctrine of the Mean [*Zhong Yong*], and The Great Learning [*Da Xue*], which formed the center of Confucian education along with the Five Classics.

*Four Modernizations:* Goal of Chinese domestic policy, announced in 1978, to develop the four areas of agriculture, industry, national defense, and science and technology. In pursuit of this goal, China under Deng Xiaoping implemented an open-door policy toward the West, developing special economic zones and sending students abroad.

*Five Classics:* Five works (*The Book of Rites* [*Li Ji*], *Spring and Autumn Annals* [*Chun Qui*], *The Book of History* [*Shu Ji*], *The Book of Poetry* [*Shi Jil*], and *The Book of Changes* [*Yi Jing*] said to have been edited by Confucius. Together with the Four Books, they formed the central canon of Confucian learning.

*Gang of Four:* Group consisting of Yao Wenyuan, Zhang Chunquiao, Wang Hongwen, and Jian Qing, who were officially blamed for creating and directing the Cultural Revolution. Arrested under Hua Guofeng's orders in October 1976, the four were tried and convicted in nationally televised proceedings in 1980.

*Great Leap Forward (1958–1961):* Attempt launched by Mao Tse-Tung to heighten economic productivity dramatically in China through mass organization and the inspiration of revolutionary fervor among the people. Exaggerated reports of the success of policies such as the radical collectivization of peasants into large "people's communes" and the decentralization of industrial production temporarily masked the actual economic disaster and widespread famine brought by the Great Leap.

*Hundred Flowers movement (1957):* Brief period of liberalization begun in May 1957, when Mao encouraged the "blooming of a hundred flowers and the contending of a hundred schools of though" and called for the nation's intellectuals to criticize the Communist Party. The resultant outpouring of expression was swiftly cut off by the end of June, when an "anti-rightist campaign" was launched against those who had spoken suit.

*Jiang Qing [Jee-ahng Ching] (b. 1914):* Third wife of Mao Tse-Tung, a former Shanghai movie actress who rose in the late 1960s and early 1970s to become a major political figure of the Cultural Revolution. Arrested in 1976, after the death of her husband, on charges that as the leader of the Gang of Four she was personally responsible for directly persecuting hundreds of party members and indirectly causing the suffering of millions of Chinese. Her death sentence was commuted to life under house arrest.

*Liu Shaoqi (Lee-o Shaow-chee] (1898–1969):* Soviet-educated Communist organizer and theorist, author of *How to Be a Good Communist.* Publicly recognized in the early 1960s as Mao's successor to party leadership, Liu was severely criticized as a "capitalist roader" and purged from the party during the Cultural Revolution.

*Mao Tse-Tung [Maow Dzuh-Dohng] (1893–1976):* Peasant from Hunan who became an early member of the CCP while working in the Peking University library under Li Dazhao. He rose to party leadership by the 1930s, advocating that China's Marxist revolution would be won by the peasants, not by an urban proletariat. Led the CCP on the Long March and then to establish the People's Republic of China in 1949. Until his death in 1976 he was the paramount political leader and theorist of Chinese communism.

*People's commune (renmin gongshe):* Central unit of economic and political organization in the countryside, some consisting of tens of thousands of families, introduced in the Great Leap Forward and popularized again in the Cultural Revolution. Communes were further divided into brigades and production teams that directed labor and divided work points.

*Revolutionary committees:* Small groups created during the Cultural Revolution to lead local urban governments, rural communes, universities, and other institutions. Each group consisted of representatives from "the masses," the People's Liberation Army, i.e., the name given to the Armed Forces of China (PLA), and select cadres.

*Tiananmen Square Incident:* Mass demonstrations that occurred on April 5, 1976, in Tiananmen Square expressing grief over the death of Zhou Enlai, held on the traditional holiday of Qingming, when the Chinese pay respects to their dead ancestors. Interpreted as a criticism of Mao and the Cultural Revolution.

## APPENDIX B

### China's Stabilization Program of 1993: The 16-Point Program[5]

The package of measures introduced in June 1993 to tackle the problem of overheating include the following essential elements.

Financial measures

a. Raising interest rates on bank deposits and loans, and on new treasuring issues, effective July 11, 1993.
b. Mandating all specialized banks to recover their loans exceeding the lending ceilings set by The People's Bank of China (PBC) by August 15, 1993.
c. Mandating all specialized banks to examine their interbank lending to non-financial institutions with the view to recovering illegal loans.
d. Separating policy lending form commercial lending by specialized banks.
e. Strengthening the authority of PBC headquarters.
f. Listing shareholding companies in the stock market according to the state stipulations.

Fiscal measures

g. Cutting administrative fees by 20%.
h. Mandating all regions to complete their sales of state treasury bonds before July 15.

Investment planning measures

i. Reexamining all locally approved development zones.
j. Cutting the investment in capital construction.
k. Increasing investments on the transport sector.

Other measures

l. Reforming the foreign exchange retention system.
m. Stopping issuing IOUs to farmers to pay for grain purchases.
n. Stopping local authorities from collecting funds illegally from enterprises and farms.
o. Dispatching inspection teams to 20 provinces and autonomous regions to examine financial probity.
p. Discontinuing new price reform measures that would inflate prices for the rest of the year.

# APPENDIX C

## Major Events in China Since Mao Tse-Tung[6]

The stages of accounting developments in China since Mao Tse-Tung overlap. For convenience, the dates given in this appendix to each stage are chosen to indicate roughly the year around which discernible accounting change took place.

### *First Stage — The Mao Tse-Tung Initial Society (1949 to Around Mid-1960)*

| | |
|---|---|
| 10/1/1949 | The birth of the People's Republic of China (PRC). |
| 10/1949 | The main focus in the first months of PRC was on the practical tasks of restraining inflation, building up agricultural production, restoring the dismantled heavy industries, and maintaining law and order. |
| 12/1949 | Mao visited Moscow. |
| 1950 | Land reform began in rural areas. Although the holdings of the landlords themselves were confiscated and redistributed, in many cases the land of rich peasants was not touched. |
| 1950 | The CCP had 4,448,080 members in October 1949. The membership reached 5,821,604 at the end of 1950. Regional branches of the party were coordinated at the top by the Central Committee, which had 44 members in 1949. Fourteen of those members constituted the Politburo which was effectively run by its five-man "standing committee," Mao Zedong, Liu Shaoqi, Zhou Enlai, Zhu De, and Chen Yun. At the apex of the formal government was the Central People's Government Council, of which Mao Zedong was named Chairman. Zhou Enlai became premier of the State Council. Under Zhou were 24 new ministries. |
| 6/1950 | A massive force of North Korean troops crossed the 38th parallel and invaded South Korea, starting the Korean war. |
| 10/1950 | Chinese troops, the People's Libration Army (PLA) crossed secretly into North Korea and began to aid the North Korean Communists. |
| 1950 | By late 1950, almost all foreigners left China. |
| 1951 | The Three-Anti campaign, i.e., anti-corruption, anti-waste, and anti-obstructionist bureaucracy, was launched against corruption within the party. |
| 1/1952 | The Five-Anti campaign was launched in cities. The campaign was against bribery, tax evasion, theft of state property, cheating on government contracts, and stealing state economic information. |
| 1953 | This is the starting year of the first 5-year plan, which aimed at a dramatic increase in industrial production, close collaboration between China and the Soviet Union, higher level of investment in public health and welfare, and development of well-armed conventional forces and a professional army. Also, peasants were pooled in cooperatives. |
| 1950s | International prestige grew swiftly. |
| 1954 | Military was divided into 13 regional commands under the direction of the PLA general quarters, which reported both to Military affairs Commission (Mao Zedong) and to the Ministry of Defense (Peng Dehuai). This structure exerted far more effective central control. |
| 1957 | A Hundred Flowers Campaign started. Intellectuals, raised a concerted cultural and political outcry against the policy set by Mao during the Yan'an Rectification Campaign in 1942, and called for more freedom and democracy. |
| 7/1957 | Mao Zedong launched the "anti-rightist campaign." More than 300,000 intellectuals who spoke out during the "A Hundred Flowers Campaign" had been branded "rightists" by the end of the year. This campaign marked the end of the "A Hundred Flowers Campaign." |
| 1957 | US announced that it would deploy matador missiles in Taiwan, thus ending the PRC's hope to recover Taiwan by military forces. |
| 1958 | 740,000 cooperatives merged into 26,000 communes, comprising 99% of the peasant population. The communes were organized along military lines. Along with the communes emerged the |

pooling of all household, child-raising, and cooking arrangements. The massing of huge numbers of rural and city workers for giant irrigation, terracing, and construction projects changed the face of China's landscape. In the mean time, large scale of uranium and petroleum prospecting was going on.

1958 A huge people's militia was established all over the country, and it became a potential rival to the PLA.

1958 City wall demolished in Beijing. The whole city was honeycombed with a maze of underground shelters in defense of possible foreign invasion.

1958 Most party leaders believed that the party had moved too far and too fast. By early 1959, some communes were already returning to their earliest cooperative forms. In some areas, private plots were once again allocated to individual families.

12/1958 At the Wuhan meeting of the CCP central committee, Mao stepped down as head of state.

1959 Liu Shaoqi was named to Mao's place. But Mao kept his other powerful positions as chairman of the CCP and of the Military Affairs Commission.

7/1959 At Lushan meeting of the CCP, Peng Dehuai, the army marshal, criticized Mao of the extremism of his plan and voiced grave doubts about the accuracy of the enormous grain-harvest figure 375 million tons. Mao did not treat criticism of policy within senior party ranks as constructive opinion, however, he took it as an attack on his own leadership and foresight. As a Peng's position.

1959–1962 A famine on a gigantic scale that claimed 20 million lives or more. As China's investment in industry rose to an amazing 43.4% of national income in 1959, grain exports to the Soviet Union were also increased to pay for more heavy machinery. The average amount of grain available to each person in China's countryside, which had been 205 kg in 1957 and 201 kg in 1958, dropped to a disastrous 183 kg in 1959, and a catastrophic 156 kg in 1960. In 1961 it fell again to 154 kg.

1959 Tibet rebellion was cracked down. Dalai Lama fled to India.

1960 The Soviet Union removed all its 1390 experts and advisers in China, leading to the cancellation of 343 major contracts and 257 other technical projects.

1963 Mao launched a Socialist Education Campaign. Class struggle was re-emphasized across the land as all joined in the fight for "four cleanups" in the spheres of accounting procedures, granary supplies, property accumulation, and in the system of allocating compensatory work points in return for hours and types of labor performed in the communes.

1963 Lin Biao pushed to publish "Quotations from Chairman Mao," and it was studied all across the PLA. This was a move by Lin to ingratiate with Mao to grab more power.

## *Second Stage — The Post-Revisionist Era and the Counter Revolution (Mid-1960s to the Latter Part of the 1970s)*

1963 Wu Han, an expert on the history of the Ming dynasty, published *"The Dismissal of Hai Ruifrom Office,"* a play about a celebrated Ming official. Wu had the reputation of using examples drawn from Ming history in order to criticize the Chiang Kai-shek and the Guomindang during the World War II. This play drew an intense debate.

2/1966 Lin Biao formally invited Jiang Qing, Mao's third wife, to coordinate the new cultural policies for the PLA.

1966 Anti-Wu Han campaign led to the Cultural Revolution.

Two Quite different groups met to discuss the Wu Han case. One was the Group of Five, which met under the direction of Peng Zhen, mayor of Beijing. This group included senior staff from the press, party academics, and members of the Ministry of Culture, almost all of which could be regarded as professional party bureaucrats and intellectuals who embraced the status quo. The second group was under the general guidance of Jiang Qing. Members of this group were radical or non-establishment intellectuals. Peng Zhen's conservative Group of Five tried to defuse the Wu Han case by treating it as an academic debate rather than as a political matter involving the crucial factor of class struggle, while Jiang Qing's group branded Wu Han's work as a perfect example of politically erroneous writing, and warned that the Chinese cultural garden was overgrown with "anti-socialist poisonous weeds." So were the lines at

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| | last drawn, beyond effective mediation, for the cataclysmic central phase of what Mao and his supporters called the Great Proletarian Cultural Revolution. This movement defies simple classification, for embedded within it were many impulses at once feeding and impeding each other. |
| 1966 | A purge of the cultural bureaucracy commenced. A lot of intellectuals, including historian, Wu Han, were beaten to death or died of their injuries. Countless others committed suicide. With all schools and colleges closed for the staging of revolutionary struggle, millions of the young were encouraged by the Cultural revolution's leaders to demolish the old buildings, temples, and art objects, and to attack their teachers, school administrators, party leaders, and parents. The party was purged at higher and higher levels until both Liu Shaoqi and Deng Xiaoping were removed from their posts. |
| 1969 | Liu Shaoqi, weakened by his imprisonment, constant interrogations, and physical mistreatment, and denied medical care, died in 1969. |
| 1969 | Lin Biao, the PLA commander was declared Mao's chosen successor at the national party congress. |
| 1969 | Sino–USSR border clashes claimed 800 lives of China and 100 of USSR. |
| 10/1971 | The PRC was admitted to the China seat in the UN, and Taiwan forced to withdraw. |
| 1/1970 | At the 135th regular Warsaw meeting, China softened tone toward the United States. |
| 4/1971 | China invited the US table-tennis team for a visit (Ping-Pong diplomacy). |
| 7/1971 | Henry Kissinger met privately with Zhou Enlai in China. |
| 9/13/1971 | Lin Biao died of a plane crash on his way to Mongolia. |
| | Mao Zedong began to have second thoughts about Lin, and about the way the PLA was handling the protracted purges and investigations of veteran party cadres during the Cultural Revolution. Mao was seeking once again to strengthen the party. Lin Biao, driven to desperation by the collapse of his high political ambitions, sought support among his closest friends for an assassination attempt on Mao. Unable to implement this plan, Lin panicked and fled China to Mongolia. |
| 2/1972 | President Nixon visited China. |
| 2/28/1971 | A Joint communiqué issued, summarizing both the American and Chinese points of view on global politics. It marked a turning point of parallel significance in China's foreign relations. |
| 1973 | Deng Xiaoping returned to power following Lin Biao's death. |
| 8/1973 | Lin Biao's death was officially announced. |
| 1973 | The Gang of Four — "Zhang Chunqiao, Wang Hongwen, Jiang Qing, and Yao Wenyuang" rose to power of the Cultural Revolution. |
| 1973 | Examinations for university entrance reappeared. |
| 1974 | The "Anti-Lin Biao anti-Confucius" movement became a mass campaign all across China. Scholars in China began to publish articles on Confucius that had clear implications for the Cultural Revolution, the bureaucracy, and the role of labor in society: Confucius was described as a representative of the declining slave-owning aristocracy who hated the emerging feudal landlords and their supporters, the legalist philosophers. |
| 3/1974 | Zhou Enlai was attacked. |
| 1974 | A combination of worldwide recession and inflation resulted in a US$760 million trade deficit for China in 1974. |
| 1975 | Hua Guofeng was named a vice-premier of the State Council and placed in charge of China's agricultural development. |
| 1/8/1976 | Zhou Enlai died. |
| 4/5/1976 | April fifth movement in memory of the late premier Zhou Enlai was cruelly suppressed by government. |
| 4/7/1976 | Deng Xiaoping was purged again. |
| 6/28/1976 | One of the worst earthquakes in China's recorded history occurred, with its epicenter in Tangshan, Hebei. The city of Tangshan was virtually obliterated, and the death toll was later officially reported as 242,000, with 164,000 seriously injured. |
| 9/9/1976 | Mao Zedong died. |
| 10/6/1976 | The Gang of Four arrested with warning by Hua Guofeng's orders. |
| 10/1976 | Hua Guofeng rose to the position of Chairman of PRC. |

7/1977 Deng Xiaoping was reappointed to vice premier, to the Politburo, and to the Military Affairs Commission. Given the different political philosophies of Deng and Hua, China's direction in both domestic and foreign policy remained ambiguous throughout 1977 and 1978. Hua embraces the radical program, while Deng was maneuvering with growing success to move toward full implementation of a modernization plan that would incorporate foreign investment and technology along with the training of Chinese students overseas. However, China was scoring a number of signal achievements requiring high levels of technological skill. In the arena of foreign policy, tensions with the Soviet Union remained extremely high.

3/1978 A new Chinese constitution adopted to address the needs of technical personnel and the protections to be afforded these people.

12/1978 At the third Plenum of the Eleventh Central Committee of the CCP, the requirements of the Four Modernization's (i.e.,agricultural reform, technical training, industrial development, and national defense) were spelled out with new clarity. Referring to agricultural policy, the plenum pointed out that production on private plots must not be interfered with. The CCP announced that the Tiananmen demonstrations in memory of Zhou Enlai, held in April 1976, should be viewed favorably as a completely revolutionary action.

1978 Birth of China's first Democracy Wall in Beijing. Wei Jingsheng proposed the fifth modernization, democracy, on the Wall.

1978–1979 Numerous demonstrations took place pleading the government for human rights and democracy. The government crackdown began in mid-January 1979. Wei Jingsheng was arrested in 4/79.

1/1979 The United States and China announced the opening of full diplomatic relations.

1/28/1979 Deng Xiaoping visited the US.

2/1979 A large force of People's Liberation Army troops invaded the northern part of Vietnam.

3/5/1979 After absorbing heavy casualties and experiencing paralyzing logistical difficulties, the Chinese began their withdrawal from Vietnam on March 5, 1979.

7/1979 The Central Committee of CCP moved to establish four "special economic zones," Zhuhai, Shenzhen, Shantou, and Xiamen, of which Shenzhen has proven a success.

1979 Hua Guofeng was ousted from the most important post of the Party and the army by Deng and his two protégés: Hu Yaobang and Zhao Ziyang.

1/25/1981 The Gang of Four were tried and sentenced, which marked the demise of Hua Guofeng and end of the political era of Chinese "Leftist."

7/1/1982 China's total population was more than 1 billion. The huge figure prompted the promulgation a new marriage law that permits only one child be born to each family.

## *Third Stage — Opening Up of the Chinese Economy to Outside Capital (Latter 1970s to Around 1992)*

1980s China was run by a shifting group of between 25 and 35 people. Within this ruling group were four categories of leader. One category consisted of four or five party elders so experienced and prestigious that even if they held no substantive office their advice was generally heeded. This group included Li Xiannian, Peng Zhen, Chen Yun, and Ye Jianying. The second category consisted of the figure identified as the pre-eminent leader, which is Deng Xiaoping. The third category comprised specialists who had a particular training essential to the ruling group's ability to make effective decisions; the most important areas of expertise were the economy, the energy sector, the military, and propaganda and internal security. The fourth category was generalists, whose broad-based political experience, it was hoped, made them adept at long-range policy planning that could cut across special-interest lines. Prominent in this group by mid-1980s were Zhao Ziyang, Hu Yaobang, and Li Peng.

By the 1980s, the ruling group had come to rely on networks of research institutes and personal experts, and on four institutions that worked closely with the leaders and their staffs to evaluate and coordinate national policy: the State planning Commission, the State Economic Commission, the State Science and Technology Commission, and the Ministry of Finance.

Plans approved by the leaders and their staffs, and deemed feasible by the commissions and fundable by the Ministry of Finance, would then be passed on to the 38 regular-line ministries in Beijing for discussion and implementation.

Political life in a given province was directed by three officials: the first party secretary, the governor, and the ranking military officer from the PLA. Demographic factors, personal interests, long-term relationships, and local contacts all played an important part in this complex pull of forces between central and provincial power. The potential tensions between the central and provincial governments, and within the hierarchy of each province, could have a paralyzing effect on state planning.

1980 Huge trade deficit.

1981–1982 More cautious development.

1982 Publicly criticizing Mao Zedong became acceptable. DaZhai as the model of agriculture was publicly denigrated. With these once potent symbols of revolutionary dedication now deprived of their power, economic growth itself became the prime focus of attention, with only its speed and intensity subject to debate.

1982 A trade surplus of US$6.2 billion emerged.

1982 An "anti-spiritual-pollution" campaign was launched to crackdown the sharp criticism in arts and culture.

1983 The "agricultural production responsibility system" emerged. By stipulating a contract period of 15 years or more with the farmers, the government came closer than ever to restoring private control over land use and production. In industry, enterprises were now to pay the state a 55% tax on total annual revenues, but were allowed to keep half the profits that remained after deducting production costs, with the other half going to the state; previously they had passed on all profits to the state. It was hoped that this incentive system would bolster industrial production as much as the rural incentive system had inspired peasant families.

1983 Direct foreign investment in China was estimated at US$910 million, and the PRC had taken out a further US$1.05 billion in international loans.

Problems: First, there was a great deal of opposition, termed as 'leftist' by the government, to the new incentive patterns in the countryside. Second, the movements of workers responding to new labor opportunities made it difficult for the Ministry of Public/Security to keep track of all citizens; accordingly for May 7, 1984, all Chinese over 16 would have to carry identity cards. Third, the emphasis of the reform program on the coastal cities began to prompt serious worries that the inlandregions of China would lose out in this new potential economic expansion. Finally, the neweconomic incentives had led to a documented and alarming rise in economic crime.

1984 The concept of special economic zones was extended to 14 more coastal cities and to Hainan Island.

1979–1984 The government began to rebuild the shattered legal system. Law schools were developed, and a Code of Civil Procedure was drafted. Tax law rapidly assumed importance.

9/26/1984 The British and Chinese signed an agreement, stipulating that sovereignty over Hong Kong would revert to China on July 1, 1997.

1985 All the inherent tension and promise of the post-Mao years came together. In the summer of 1985 the government announced the first bankruptcy cases to occur in China since the nationalization of the economy in the 1950s. Along with a general lack of initiative and the threat of bankruptcy, corruption spread as the economic opening to the West continued.

In the area of foreign policy, China's attitudes toward the United States and the Soviet Union was deeply ambiguous. the possibility seemed to be emerging that China would swing back, at least part way, toward the Soviet Union, and adopt a more cautious attitude with regard to the United States. But the signals were contradictory.

At least 140 elderly CCP leaders stepped down, allegedly voluntarily, from senior government posts. Around 900,000 other cadres aged sixty or more at various levels retired. A new group of younger, technologically trained cadres was promoted to senior office.

1985 The accounting law of the People's Republic of China was adopted at the Ninth Session of the Standing Committee of the Sixth National People's Congress.

1986 Student democratic movements in Hefei, Wuhan, and Shanhai, etc., calling for democracy in political life. The government tried to discredit the protest movement by blaming it on a few troublemakers. Despite the bans and condemnations of the authorities, fresh demonstrations spread out in other cities. The party hard-liners moved swiftly to quash the burgeoning student movement, and Professor Fang Lizhi, vice-president of the university of Science and Technology

and supporter of democracy, was dismissed from the Party and removed from all teaching duties and other important posts.

1/16/1987 Hu Yaobang was forced to resign. His outspokenness on the need for rapid reform and his almost open contempt of Maoist excesses had made him a controversial leader of the party and the scapegoat for the student's unrest. Premier Zhao Ziyang took over Hu's duties as secretary-general on an acting basis until a full-time successor was found.

10/25/1987 The CCP's 13th congress was convened in Beijing, and Western reporters were admitted to the congress for the first time.

11/1/1987 Deng resigned from the Committee; some hard-liners such as Chen Yun and Peng Zhen resigned as well. Four new younger members, Li Peng, Yao Yilin, Qiao Shi, and Hu Qili, were elected to serve with Zhao Ziyang. But Deng remained China's pre-eminent leader, and continued to serve as the chairman of the Military Affairs Commission, which gave him ultimate control over the PLA. Deng also arranged for the 84-year-old Yang Shangkun to be named China's president. The government allowed the PLA to sell its weapons worldwide and to keep for its own use a large proportion of any foreign currency obtained through such deals.

1987 Inflation ran as high as 20% in the first quarter, and it was up to 26% or more in urban areas by year's end. Living standards fell for many in the cities, and retrenchments in capital projects ordered by the government threw man out of work.

1988 Chiang Ching-kuo died. Lee Teng-hui took up the position of president. Within a few months of his accession, all travel restrictions were lifted on Taiwanese who wished to visit their relatives in the PRC. Taiwan businesses that for years had surreptitiously been routing their dealings with the PRC through Hong Kong agents or subsidiaries began openly to move production to China, taking advantage of the tax incentives in the special economic zones and of wage rates that in some cases were as little as one-tenth those they paid their workers on Taiwan.

1988–1989 At the plenum of the Central Committee in late 1988 and in the National People's Congress of early 1989, the government began to discuss some difficulties facing the society, of which seven seemed paramount: inflation, low grain production, labor unrest, graft, unregulated population movements, repaid population growth, and illiteracy. The government was so short of cash that it began paying peasants with scrip or promissory notes for their compulsory procurement quotas; yet the peasants were not allowed to sue these IOUs in trade for essential fuel and foodstuffs, and much bitterness resulted. Labor unrest sprang in part from urban inflation and in part from the harsh work conditions imposed by the new breed of entrepreneurial managers. Graft and corruption among CCP members, many of them the associates of local managers, continued to grow. Internal migrations of part-time workers and disaffected or unemployed rural and urban populations were also reported to be uncontrollable. China's exports for 1988 were US$47 billion, ranked 16th in the world, but imports totaled US$54 billion. A number of the most publicized joint ventures had run into major crises. Oil drilling by jointcorporations off the southeast coast had not yielded the immense discoveries confidently expected a few years before. And the special economic zones themselves were often mismanaged and graft-ridden. The dream of reforming China's economy and modernizing the whole nation seemed to be disintegrating before people's eyes.

1989 Hu Yaobang's death prompted the shocking Tiananmen Square Democratic Movement.

## NOTES

1. The concept of the "demonstration effect," introduced by the economist James Duesenberry, was widely used in the debate on economic development in the 1950s. The concept then aimed to explain the upward shifting of the propensity to consume (and thus adversely affects savings), as each contact with higher pattern of goods consumed by our *neighbor "demonstrates"* the effectiveness of such goods, whether judged in terms of convenience, comfort or even prestige. It is used in this paper in a different way — that through globalization and the opening up of markets, the high achievement under other economic and political system *"demonstrates"* the benefits of some of such policies that might then lead to an effort to assimilate them domestically.

2. In December 1958, at the Wuhan meeting of the Chinese Communist Party (CCP) Central Committee Mao stepped down, Liu Shaoqi was named in Mao's place. But Mao kept his other powerful positions as Chairman of the CCP and of the Military Affairs Committee.
3. "What remains unclear is why these price differentials have persisted for so long, without arbitrage eliminating them. One factor is clearly the undeveloped transport and information system, but beyond this, provincial protectionism and import barriers explain how such differentials can continue." (World Bank, 1992, p. 40).
4. Selected entries taken from Spence (1990, pp. 789–811).
5. Taken from page 19 of World Bank (1995).
6. The author recognizes with thanks Ying Li's assistance in compiling Appendix C.

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# Applicability of the Conservatism Accounting Convention in China: Empirical Evidence

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**Key Words:** Chinese accounting; Conservatism accounting convention; Accounting reforms; Prudence accounting; Accounting internationalization; Accounting standards

***Abstract:*** *"Conservatism" is a widely accepted accounting convention in the industrialized world, but it has long been slated and prohibited in China under the orthodox ideological influences. To date, the conservatism convention has not been fully adopted or implemented in Chinese accounting although the Chinese government has made substantial efforts to reform its accounting system to bridge the gaps between the accounting practices in China and other industrialized countries in recent years. This study has, through a wide range questionnaire survey, empirically investigated the applicability of the conservatism accounting convention in China. We found that the survey respondents (consisted of business accountants, management, government officials, bank loan officers, investment analysts and auditors), in general, held no negative attitudes against the conservatism convention under the changing business environment in the country. There is clear evidence that various interested parties of business accounting would support an expanded adoption of "conservatism" in Chinese accounting. The study findings will facilitate a proper assessment of the future development of accounting standards and practices in China.*

"Conservatism" is one of the most influential practical conventions underlying contemporary accounting since the beginning of this century (Sterling, 1967; Citron, 1983). The concept of conservatism is, however, very controversial in accounting literature, and it has long been labeled as a "convention," instead of a "principle" or "standard" in accounting literature and official statements of accounting standards (Belkaoui, 1985). Nevertheless, this concept has a wide application in accounting standards and practices today in most industrialized countries (Stober, 1994).

Under the communist ideological influences in China, conservatism has long been slated as a tool to manipulate accounting numbers and maximize the profits of capitalists

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in exploiting workers. Thus, this accounting convention has virtually been prohibited in China for almost a half century since 1949 (Ge, 1993). Although substantial changes have taken pace in recent years resulted from the prolonged and wide-ranged economic reforms launched in the late 1970s, the conservatism convention has not been incorporated in current accounting regulations and standards in China except for a restrictive adoption of some conservative accounting procedures for certain types of business entity. Recently, the Chinese government has introduced a new business accounting system (consisting of *Accounting Standards for Business Entities* (ASBE) and 13 industry-specific accounting systems) in 1993 in order to reconcile Chinese accounting with the internationally accepted accounting practices. The new accounting system is fairly close to the international accounting standards (IASs) developed by the International Accounting Standards Committee (IASC), but substantial gaps remain. As observed by some accounting practitioners and scholars, a major difference between Chinese accounting and the practices prevailing in the industrialized world today lays in a lack of conservatism in Chinese accounting standards and practices (Ge and Lin, 1993; Winkle et al., 1994; Graham and Li, 1997). Many widely accepted conservative accounting procedures have not been adopted or fully applied in China. This has caused Chinese accounting difficult to understand by international investors (Chen et al., 1997; Lawrence, 1997).

This paper empirically examined the applicability of the conservatism accounting convention in China. A mail questionnaire survey was conducted to investigate what is the prevailing attitude of the users and providers of business accounting information in China towards conservatism and if there is any support for the adoption of this convention in Chinese accounting standards and practices. Based on the responses of survey subjects consisting of business managers, accountants, government officials, bank credit and loan officers, investment analysts, public practitioners (Chinese CPA) and accounting educators, this survey study demonstrates the general perception of the conservatism convention by the respondents under current Chinese business environment. We found that the various interested parties, in general, possessed no negative views against conservatism though they were aware of the potential effects of this convention on the income reported by business entities and the state's taxes or fiscal revenues. In fact, there is evidence of substantial support for an expanded adoption of conservatism in Chinese accounting from various interested parties at present. The findings of this study would cast light on properly assessing the applicability of the conservatism convention in Chinese accounting and the future development of accounting standards in China.

## STUDY BACKGROUND

In accounting literature, the notion of conservatism is to employ a less optimistic attitude in handling accounting transactions or events when varied alternatives are present. The basic implication of the convention was traditionally to "anticipate no profits but anticipate all losses" (Bliss, 1924). Therefore, a series of accounting procedures based on conservatism have been developed to account for provisional expenses and potential losses in accounting practice, such as allowances for doubtful accounts, reserves or provisions for inventory price-drops, lower of cost or market (LCM) for inventory valuation, accelerated depreciation, write-off of research and development expenditures,

and so on. A widely accepted merit of the convention is thus to avoid an overstatement of assets or income in the financial statements or to provide a buffer for potential losses that may possibly occur in business operations with inherent uncertainty or risks (Sterling, 1967).

Accounting practices were once over-optimistic instead of conservative in most industrial countries. For example, firms inclined to adopt accounting alternatives that would have overstated their assets or income at the beginning of this century. As a result, accounting numbers in the financial statements were often superficial or departing from the actual values of firms' assets or income. Overstatement in financial position or operating results led to business failures eventually and caused substantial losses to investors, creditors and other users. Responding to criticisms from the beneficiaries of financial statements, a conservative attitude emerged in practice and led to the conservatism accounting convention that has become widely accepted by accounting profession and business community since the 1930s (Devine, 1963; Sterling, 1967).

The conservatism convention is, however, not without flaw. The main limitations of this convention are twofold. First, there is a lack of objective criteria for its application. Abuses were not uncommon and might be difficult to prevent. For instance, some firms may manipulate accounting numbers through arbitrary and inconsistent determination of allowances or provisions for potential losses, resulting in incomparability of accounting numbers over different periods within a firm or among different companies. Second, the traditional practices of conservative accounting would anticipate only the potential expenses or losses and ignore the recognition of any possible gains. This would also cause a misstatement of firms' assets or income because an understatement of possible assets or income, like an overstatement, could not truthfully represent the financial position and operating results as well (Belkaoui, 1985; Hendrikson and van Breda, 1992). Owing to these two major constraints, the conservatism convention could not be free of attack over time. This may explain why conservatism cannot be treated as an accounting "principle" or "standard," even though it has a direct and overwhelming influence on contemporary accounting procedures.

Criticisms against conservatism rose sharply in the early 1980s as decision usefulness of accounting information has been emphasized in accounting theory and practice. The fundamental notion or implication of conservatism was re-examined by professional bodies or standard setters amid the studies of the conceptual framework of financial reporting in many western countries (Citron, 1983; Mensah et al., 1994; Nikolai and Bazley, 1997). For instance, the Financial Accounting Standards Board (FASB) in the USA has repeatedly discussed this concept in its conceptual framework studies and attempted to modify the concept as it would be more synonymous with "prudence": "Conservatism is a prudent reaction to uncertainty to try to ensure that uncertainty or risk inherent in business situations are adequately considered. Thus if two estimates of amounts to be received or paid in the future are about equally likely, conservatism dictates using the less optimistic estimate" (para. 95, SFAC No. 2, FASB, 1980). FASB has however stated clearly: "conservatism in financial reporting should no longer connote deliberate and consistent understatement of net assets and profits" (para. 93, SFAC No. 2). The Accounting Standards Committee in the UK has made similar efforts in the late 1980s, to rephrase conservatism as "a prudence concept," i.e., a prudent attitude and consistent

approach to asset valuation and profit measurement under the conditions of uncertainty involved in accounting transactions (Paterson, 1990).

FASB's view has been generally accepted by professional accounting bodies and practitioners in the industrial world since the late 1980s. Uncertainty in business operations is inevitable. Accountants must apply various kinds of estimate or projection in recognition and measurement of assets, liabilities, equity, revenues, expenses and income. Relatively speaking, a conservative or prudent attitude in making accounting estimates and judgment is a necessary and expedient approach to cope with uncertainty or risks inherent in accounting transactions. This would be beneficial to the interest of business investors, creditors and other users. Thus, even accompanied by continuous criticisms, conservatism becomes a most influential concept underlying contemporary accounting and may even modify or override other conventional accounting principles or standards. Examples include the convention of lower of cost or market (LCM) to the cost principle; recognition of installment sales to the revenues realization principle, provision for inventory price-drops or impairment of long-term assets to the matching principle governing expense recognition and measurement, and so on. Several empirical studies in recent years have consistently demonstrated a wide application of the conservatism convention in accounting practices in the USA and other western countries (Mensah et al., 1994; Stober, 1994; Basu, 1997). This concept has also been recognized by the International Accounting Standards Committee (IASC) and embodied in a series of International Accounting Standards (International Accounting Standards Committee [IASC], 1993).

China is a socialist country with the public ownership of production means and a centralized command economy in place since the founding of the People's Republic in 1949. The Chinese accounting system has long been framed to serve the state's needs for economic planning and administration at the macro-level. Thus, there were substantial differences in the accounting objectives and procedures in China and other western countries for a fairly long period (Lin, 1988; Lou and Zhang, 1992; Scapens and Hao, 1995). Changes have however taken place in pace with the economic reforms towards a market-oriented economy since the late 1970s. Chinese accounting has entered a period of transition in recent years. For instance, separate sets of accounting regulations that are more in line with the internationally accepted accounting practices have been introduced to foreign-invested enterprises (including joint-ventures and foreign subsidiaries operating in China) and publicly listed companies (PLCs) in 1985 and 1992, respectively. More recently, the government implemented a new national business accounting system in 1993, aiming at adopting the accounting practices prevailing in other industrialized countries, and better satisfying the information needs of government, business management, investors, creditors, and other interested parties.

The new business accounting system, at present, consists of the ASBE and 13 sets of industry-specific accounting regulations (systems) enforced by the Ministry of Finance. Many researchers, inside and outside China, observed that the new business accounting system of 1993 is, in general, fairly consistent with the internationally accepted accounting practices (Ge and Lin, 1993; Taussig et al., 1994). The new accounting system, applicable to all business entities, would improve the understandability of business financial statements to domestic and overseas investors and creditors, and enhance the comparability of accounting information among business entities with different ownership

structures and administrative patterns. However, gaps between Chinese accounting practices and the internationally accepted norms have not been completely bridged at the moment. In light of some recent studies of the Chinese accounting development, the major remaining differences between accounting practices in China and the industrialized world lie in the application of the conservatism convention (Winkle et al., 1994; Liu and Turley, 1995; Davidson et al., 1996; Tang and Liu, 1997). According to Hepp and Chen (1997), the new Chinese accounting system introduced in 1993 is short of many internationally accepted accounting procedures based on conservatism. For instance, accounting procedures such as allowances for doubtful accounts, provisions for inventory price-drops, lower of cost or market inventory valuation, accelerated depreciation of fixed assets, write-off of permanent impairment of long-term investments or R&D expenditures, and recognition of foreign exchange losses, have not been adopted, or only partially applied with strict restrictions in the new business accounting system. This lack of conservative accounting treatments has actually prevented Chinese accounting information from being fully understandable and useful to many domestic and international users (Lawrence, 1997).

In order to accommodate the growth of the emerging market-oriented economy, the Chinese government has planned for further reforms of the accounting system. A project of formulating a set of transaction-based "Detailed (practical) accounting standards" applicable to all types of business entities is currently underway. With financial support from the World Bank and technical support of Deloitte Touch Tohmatsu International, about 30 pieces of the "detailed accounting standards" have been drawn with their exposure drafts released in 1995 and 1996. The proposed detailed accounting standards will provide further practical guidelines for harmonizing Chinese accounting practices with that in the industrialized world. However, the formal release and implementation of the proposed detailed accounting standards have been postponed owing to strong resistances from government authorities and some practitioners.[1] The main resistance is targeted at the conservative accounting alternatives that would be adopted in the proposed detailed accounting standards (Qu, 1997).

Arguments behind the rejection or restriction of employing conservatism in Chinese accounting include: (1) the convention has long been, under the traditional communist doctrines, blamed as a tool for income manipulation or creating "business secrecy" (secret reserves) by capitalists, thus it was labeled as incompatible to the socialist economy in China; (2) the government has worried that conservatism would lead enterprises to flexibly set up allowances or provisions for potential loses and reduce income reported by enterprises. This might result in a substantial drop in the state's fiscal revenues as most of enterprises remain owned and run by the government so far;[2] and (3) government authority in charge of accounting affairs and the Chinese accounting professional bodies are afraid that the application of conservatism may cause a great confusion in practice as the majority of Chinese accountants are short of sufficient training and skills for exercising professional judgment required in properly applying the conservatism convention (Yang and Cao, 1992; Li, 1993; Liu et al., 1995). Furthermore, some overseas scholars have also voiced an objection to adopting the conservatism convention at a foreseeable future in order to prevent a rampant of income manipulation in current business situations that lack of independent auditing and effective standard enforcement in China (Chen et al., 1997; Xiang, 1998).

However, none of the above arguments should deny the applicability of conservatism in Chinese accounting. In particular, business environment in China has become much more diversified at present. Business uncertainty and risks rose sharply in the emerging market-oriented economy. Although strict restrictions on the use of this convention have been imposed under the existing accounting regulations and standards, it does not warrant that there is no support of the conservatism convention in the real world of business accounting. In fact, some researchers and practitioners have advocated strongly for an expanded application of conservatism in China, particularly to incorporate the convention into the proposed detailed accounting standards (Chow et al., 1995; Shuen, 1995; Hepp and Chen, 1997). Their recommendations have, however, almost exclusively come from prescriptive and theoretical analysis instead of empirical studies. No evidence is available at present on should and how the conservatism convention be adopted in China. This study is an initiative attempt to empirically investigate the attitude of the providers and users of business accounting information towards the applicability of conservatism in Chinese accounting. The empirical findings of the perceptions of and demands for the conservative or prudent procedures should be beneficial to the improvement of Chinese accounting standards and to the harmonization of Chinese accounting with the practices prevailing in other industrialized countries.

## STUDY PROPOSITIONS

The primary objective of accounting is to satisfy the information needs of financial statement beneficiaries (Financial Accounting Standards Boards (FASB), 1978, SFAC No. 1). The demands of financial statement users and other interested parties are a driving force for the development of accounting standards and practices. Hence, we intend to investigate the general attitudes towards, or the demand for, the adoption of conservatism in Chinese accounting by the beneficiaries of business accounting, in order to generate empirical evidence to assess the applicability of the conservatism convention in Chinese business environment. Mailing questionnaire survey was employed. Subjects of the survey include various interest parties associated with preparation and utilization of business accounting information, i.e., accountants, management, government officials, investment analysts, bank credit or loan officers, and auditors (the certified public accountants, Chinese CPAs). To facilitate a comparative analysis, accounting educators at universities were also included in the survey. We anticipated that a wide range survey of the users and providers of accounting information should reveal the representative perception of the applicability of the conservatism accounting convention under the existing business environment in China.

The purposes of this study are multifold. One of its major study objectives is to examine the general attitudes towards conservatism by financial statement beneficiaries in China. Apparently, some Chinese accountants or financial statement users may have prejudice or objections against the conservatism convention owing to persistent influences of the orthodox ideologies in the communist region and the traditional accounting models derived from a highly centralized command economy in the past several decades. In particular, they may be overshadowed by the negative effects of conservatism and possess a denial view against the convention. It is necessary to investigate whether such a negative

perception would represent the mainstream attitude of the accounting beneficiaries in China. This analysis is vital to assess the applicability of conservatism in Chinese accounting as well as the development of accounting internationalization in China. Taking into consideration of the transition from a command economy into a market-oriented economy in the country, we expected that the negative view against 'conservatism' would no longer be a dominant perception among various interested parties at the meantime. Thus, the first study proposition was stated as the following:

**Proposition 1:** The providers and users of accounting information in China, in general, do not possess a denial view against the adoption of the conservatism convention in Chinese accounting.

At present, a large portion of business entities in China are the state-owned enterprises (SOEs). With the majority of equity and working capital supplied by the government, a direct link between SOEs' product costs or other spending and the state's fiscal revenues and expenditures exists. Thus, SOEs' financing and accounting activities are currently subject to a much closer monitoring by the government's finance and taxation authorities. Strict control over SOEs' financing activities has resulted in varied treatments for the application of conservative accounting alternatives in SOEs and other non-governmental business entities under the existing accounting regulations or standards. For example, limited application of some conservative accounting procedures has been incorporated in accounting regulations (with restrictions) for foreign-invested enterprises and the stock companies, to serve the government's specific economic policies and facilitate business administration by varied ownership structures (Byrd, 1992; Ge and Lin, 1993; Graham and Li, 1997). But those procedures have not been allowed for SOEs. Even after the implementation of the new business accounting system of 1993, the restrictions on the application of conservatism (e.g., setting provisions at varied levels differentiated by business ownership structures, advance approval of government authorities and statutory capping of allowances for doubtful accounts, etc.) have not been abolished (Aiken et al., 1995). In addition, arguments to advocate the restrictive application of conservatism in China came from the government's worries of incompetence of accountants for exercising professional judgment in applying the convention (Shuen, 1995; Chen et al., 1997). However, the restrictive or differentiated treatments would negatively affect the understandability and comparability of accounting information produced by business entities under different ownership structures and the usefulness of financial statements across industry. We therefore investigated whether the restrictive adoption of 'conservatism' in the existing business accounting system introduced since 1993 would be accepted or rejected by various interested parties;

**Proposition 2:** Business accountants and users of accounting information in China would not support the restrictive and differentiated adoption of conservative accounting procedures for business entities with varied business ownership structures.

In the previous highly centralized command economy, the government exercised overall control over business activities. Decisions relating to business financing, purchase,

production, sales, profit determination and distribution were all specified by the authoritative plans imposed by various government authorities at different levels. There was no incentive or mechanism for business management to make strategic or operational decisions. Enterprise accounting served only a bookkeeping function to ensure a fulfillment of the imposed plans. Risks involved with production or sales were virtually sheltered by the state's economic plans. In the traditional business administrative system, the conservatism concept would hardly have any positive implication. However, the Chinese economy has undergone substantial changes following a continuing progress of economic reforms in the last two decades. Economic system has been restructured and business ownership diversified remarkably. With a sharp expansion of the non-state-owned businesses the government's control over business operations through centralized planning has been relinquished remarkably. Business failures appeared as a result of the enforcement of the Bankruptcy Law in the country in early 1990s. Most business entities (including SOEs) have now been exposed to increasing risks and uncertainty associated with operation in a market-oriented economy (Jefferson et al., 1992; Graham, 1996). Would the changing business environment affect the attitudes towards conservatism by the users and preparers of business accounting information? It is expected that there should be rising support or demands for more conservative or prudent accounting alternatives to maintain business entities' capacity for survival and expansion under the new business situations. Thus, the third study proposition of our study was targeted at investigating whether there is increasing demand for the conservatism convention, as well as what are the conservative accounting procedures badly requested by various interested parties of business accounting at present.

**Proposition 3:** The interested parties of business accounting have currently demanded an expanded adoption of the conservatism convention or a series of widely accepted conservative accounting procedures in Chinese accounting.

As mentioned earlier, a main resistance against the conservatism convention in China stemmed from the claim that conservatism would significantly reduce income reported by enterprises. This concern may be particularly pertinent to government authorities since a switch to more conservative accounting treatments may cause the state's fiscal revenues to decline sharply if enterprises (mainly the SOEs) are allowed to set up allowances or provisions for potential losses (Qu, 1997). In addition, government authorities may also worry that the governmental control or influences over business financing operations may be impaired as enterprises are allowed to have a greater flexibility in adopting conservative accounting procedures (Yang and Yang, 1998). Other user groups or interested parties may however hold different views towards conservatism. For example, as experienced in most industrial countries, external investors or creditors would not reject conservative accounting treatments if setting allowances or provisions for potential losses could better reflect actual financial position and operating results of the enterprises at which they have a stake (Basu, 1997). On the other hand, business management would have mixed attitudes towards conservative accounting treatments. They may choose more aggressive accounting alternatives (e.g., setting up little or no allowance or provision for potential losses) to boost earnings in

**Table 1.** Survey Questions and Summary Statistics

| *Questions* | *Mean*[a] | *Standard deviation* | *t-Statistic (p-value)* |
|---|---|---|---|
| **Proposition 1** | | | |
| Q1.1. The conservatism convention should be applied with a great caution in order to avoid an understatement of enterprises' assets and income. | 3.309 | 1.307 | 3.339 (0.001) |
| Q1.2. The conservatism convention would have a negative impact on the state's taxes and other fiscal revenues. | 3.071 | 1.264 | 0.789 (0.431) |
| Q1.3. The conservatism accounting convention could not result in a truthfully representation of enterprises' financial position and operating results. | 2.367 | 1.171 | −7.561 (0.000) |
| **Proposition 2** | | | |
| Q2.1. Differentiated applications of the conservatism convention should be required in accounting for enterprises with different ownership structures. | 2.847 | 1.406 | −1.520 (0.130) |
| Q2.2. The conservatism accounting convention should be consistently applied regardless of the differences in business ownership structures. | 3.600 | 1.281 | 6.536 (0.000) |
| Q2.3. It is unnecessary to set mandatory ceiling for allowances for doubtful accounts in accounting standards (i.e., leave it to management's judgement) | 3.402 | 1.398 | 3.235 (0.002) |
| **Proposition 3** | | | |
| Q3.1. The new business accounting system introduced in 1993 in China has not sufficiently embodied the conservatism accounting convention. | 3.240 | 1.136 | 2.955 (0.004) |
| Q3.2. There should have an expanded adoption of the internationally accepted accounting practices in Chinese accounting standards. | 4.268 | 0.953 | 18.723 (0.000) |
| Q3.3. The lower of cost or market (LCM) procedure should be adopted in inventory valuation in Chinese accounting | 3.709 | 1.196 | 6.678 (0.000) |
| Q3.4. Enterprises should be allowed to set up provisions for potential losses from inventory price drop. | 4.016 | 0.917 | 12.482 (0.000) |
| Q3.5. Enterprises should be allowed to set depreciation policy that can best fit their own operating conditions (including the application of accelerated depreciation methods). | 4.015 | 1.168 | 9.798 (0.000) |
| Q3.6. Losses should be recognized for permanent impairment, if can be reasonably assessed, of the fixed assets or long-term investments. | 3.929 | 1.055 | 9.921 (0.000) |

[a]Answers to the survey questions are denoted in a Likert scale of 1 to 5, with the highest score representing strongest agreement and the lowest score standing for strongest disagreement. Neutral view to each question is indicated by the score of 3.

order to have a window-dressing effect of accounting numbers and to maximize their personal gains if management compensations are tied into earnings reported (Lambert and Larcker, 1987). But business management would prefer to have a more conservative approach in asset valuation and income determination in order to obtain a buffer to cope with uncertainty or risks inherent in business operations (Basu, 1997). Hence,

various interested parties may possess conflicting views on the application of the conservatism convention in China, which will affect the development of Chinese accounting standards since standard-setting is more or less a politicization process to balance the conflicts of interest among various user groups (Solomons, 1978). We thus focused the last major interest of study on whether there are conflicting views upon, and what are the varied preferences of, conservatism among the various interested parties in China:

> **Proposition 4:** Different interest parties of business accounting have, at present, possessed varied preferences over the adoption of the conservatism accounting convention in China.

We developed the survey instrument with twelve more detailed survey questions in terms of the main study propositions outlined above. Each question in the survey instrument is designed with an answer indicated in a Likert scale of 1 to 5. The strongest agreement is denoted as 5 while 1 indicates the strongest disagreement. 3 is designated as a neutral view towards the survey questions. The survey instrument was designed in Chinese language to facilitate the responses by survey subjects inside China. The translated survey questions are presented in Table 1.

## SAMPLES AND DATA

Initially, 50 copies of the questionnaires were sent to survey subjects in some governmental departments and SOEs in Beijing area. Minor modification of the survey instruments was made after the pilot test. In total, 800 copies of survey questionnaires have been distributed in two batches in China during the summer of 1998. The survey subjects for accounting information providers consisted of business accountants/managers in SOEs and PLCs. One hundred fifty samples of each type of business entity were randomly selected from the *China Industrial Enterprises 1000 (1993/1994)* and the *China Listed Companies Reports (1998)*, respectively. Mailed questionnaires were directed to the general managers or the heads of financing and accounting sections in the sample firms.[3] Three hundred copies of the survey questionnaires were sent to external user groups of business accounting information, including officials in charge of financing and accounting in various government authorities at central and local levels (e.g., the departments of public finance, taxation, state-owned property administration, industrial administration, and state auditing), bank credit and loan officers and financial analysts in investment and securities companies.[4] Samples were selected based on data sources from *The Handbook of Chinese Governmental Institutions and Agencies (Vol. 1 and 2, 1997)*, *Almanac of China's Financing and Banking Institutions* and *China Securities Yearbook (1997)*. In addition, 120 copies of the questionnaires were mailed to practicing Chinese CPAs at the main CPA firms in China. Another 80 copies were sent to accounting professors at various universities across the country.

Two hundred and nine questionnaires were collected in total, with an overall response rate of 26.1%. Excluding 11 copies of the returned questionnaires with substantially uncompleted data, the total number of usable questionnaires is 198. The adjusted overall

response rate is 24.8%. Among the usable returned questionnaires, 71 copies came from business accountants/managers, 51 from government officials, 21 from bank officers and investment analysts, 30 from the certified public accountants and 25 from accounting educators, with the return rates of 23.6%, 34.0%, 14.0%, 25% and 31.3%, respectively.[5] Overall, the majority of respondents have received a relatively high level of education or vocational training. About 69.3% of them have completed post-secondary schooling, including 27% of the respondents possessed post-graduate degrees. About two-thirds of the respondents have working experience over 6 years, while a quarter of the total respondents have over 20-year work experience. In addition, more than 75% of the respondents hold professional titles or ranks at the intermediate level or above.[6] This indicates that the majority of the respondents are experienced and relatively senior staff in the sample entities, i.e., they are the persons holding positions at middle or senior levels within the sample enterprises, governmental units, banks and investment institutions. The views of these matured and experienced respondents towards the survey questions are expected to be reasonably reliable.

## RESULTS AND ANALYSIS

The descriptive statistics of the data collected from returned questionnaires are presented in Table 1, including overall means and standard deviations of the responses towards each question in the survey instruments. As indicated by two-tailed *t*-test results, the means of most questions are statistically significant from the media value of 3 ($p < 0.01$). Hence, the respondents have overall expressed tendentious views upon most of the survey questions.[7]

Our first study objective is to investigate whether there is a substantial resistance against conservatism from the providers and users of business accounting information in China. Data in Table 1 indicate that most respondents understood that conservatism may result in lower business income reported and agreed that the application of conservatism should come with a great caution (Question 1.1, mean = 3.309, $t = 3.339$, $p < 0.01$). They were somehow neutral towards the question of whether conservatism would have a negative impact on the state's taxes or fiscal revenues (Question 1.2, mean = 3.071, $t = 0.0789$, $p < 0.431$). However, the respondents, overall, disagreed that conservatism would prevent a truthful representation of enterprises' financial position and operating results (Question 1.3, mean = 2.367, $t = -7.561$, $p < 0.01$). These results confirm the first study proposition, i.e., the majority of users and providers of business accounting information in China possessed no particularly negative views against the conservatism accounting convention even though they were aware of its potential effects on reported business income and tax revenues to the state. This finding should have further implication. Although the conservatism convention has long been denigrated under the orthodox ideologies and traditionally excluded from Chinese accounting regulations, a rejection of the conservatism convention in China lacks of support in practice. On the contrary, the empirical data suggest that users and providers of accounting information would currently not resist the adoption of this convention.

Our second study proposition focuses on the general perception of the government's existing policy of limited and restrictive adoption of the conservatism convention in China, such as differentiated applications of certain conservative accounting practices by

business ownership structure and strict administrative control over their uses (e.g., advanced governmental approval or capping specifications imposed). The respondents, overall, would not support the limited and restrictive adoption of conservatism in practice. Rather, they expressed supportive views towards a non-differentiated application of the conservatism convention (Question 2.2, mean = 3.600, $t = 6.536$, $p < 0.01$). Furthermore, the respondents generally agreed that the proper application of some conservative or prudent accounting alternatives, such as allowance for doubtful accounts, should be determined by business management instead of the government-imposed mandatory regulations (Question 2.3, mean = 3.402, $t = 3.235$, $p < 0.01$). This will be consistent with the practices prevailing in other industrialized countries. The responses imply a lack of satisfaction with the existing restrictive regulations imposed upon those conservative alternatives being permitted to use. It can be deduced that the limited or restrictive adoption of a few conservative accounting procedures in the existing Chinese accounting regulations was mainly derived from the government's specific policy needs, i.e., to adopt certain accounting procedures more in line with the internationally accepted practices in foreign-affiliated business entities and PLCs to attract capital from foreign and domestic investors. But the government was not ready to relinquish its administrative control over the utilization of those conservative accounting procedures (Liu, 1996). However, the existing rules do not represent sound accounting treatments and can not be supported by various interested parties of business accounting. A large proportion of business entities in China are currently SOEs. Disallowing SOEs to apply the conservatism accounting convention is hardly justifiable as China is moving towards a market-oriented economy. Thus, the restrictions currently imposed should be abandoned as soon as possible in order to enhance the comparability and decision-usefulness of accounting information generated by business entities under varied ownership structures or in different industries.

Logically speaking, various interested parties associated with business accounting would support an expanded application of conservatism in Chinese accounting since they have, in general, held no negative views against the convention and they were not in favor of the limited or restrictive adoption of conservatism in the existing accounting rules. This has been confirmed by the survey responses to the questions relating to the third study proposition. Apparently the majority of respondents were unsatisfied with the existing treatments of conservatism in the ASBE and 13 industry-specific accounting systems introduced since 1993 (Question 3.1, mean = 3.240, $t = 2.955$, $p < 0.01$). In fact, they demanded overwhelmingly for a further adoption of the internationally accepted accounting standards and practices in China (Question 3.2, mean = 4.268, $t = 18.723$, $p < 0.01$). The respondents, in particular, have strongly supported the adoption of a series of conservative or prudent accounting procedures prevailing in most industrialized countries; such as: (1) the lower of cost or market (LCM) convention (Question 3.3, mean = 3.709, $t = 6.678$, $p < 0.01$); (2) provision for losses of inventory price-drops (Question 3.4, mean = 4.016, $t = 12.482$, $p < 0.01$); (3); uses of accelerated depreciation methods based on management's judgement instead of government imposed specifications (Question 3.5, mean = 4.015, $t = 9.798$, $p < 0.01$); and (4) recognition of permanent impairment of long-term investments (Question 3.6, mean = 3.929, $t = 9.921$, $p < 0.01$). The third study proposition has thus been empirically verified. Obviously, the users and providers of business accounting information in China have rather consistent views of,

**Table 2.** Statistical Comparison of Group Means among Five Groups of Respondents

| | *ANOVA* | | *Kruskal–Wallis* | |
|---|---|---|---|---|
| | *F-value* | *P-value* | *Chi-square* | *P-value* |
| Proposition 1 | | | | |
| Question 1.1 | 2.896 | 0.023* | 11.501 | 0.021* |
| Question 1.2 | 0.461 | 0.764 | 1.848 | 0.764 |
| Question 1.3 | 2.036 | 0.091** | 7.893 | 0.096** |
| Proposition 2 | | | | |
| Question 2.1 | 2.626 | 0.036* | 11.221 | 0.024* |
| Question 2.2 | 0.489 | 0.744 | 1.946 | 0.746 |
| Question 2.3 | 0.228 | 0.877 | 0.551 | 0.907 |
| Proposition 3 | | | | |
| Question 3.1 | 3.203 | 0.014* | 12.859 | 0.012* |
| Question 3.2 | 4.843 | 0.001*** | 16.577 | 0.002*** |
| Question 3.3 | 0.686 | 0.562 | 3.600 | 0.308 |
| Question 3.4 | 1.896 | 0.112 | 7.480 | 0.092** |
| Question 3.5 | 0.456 | 0.713 | 1.905 | 0.592 |
| Question 3.6 | 0.336 | 0.800 | 0.986 | 0.805 |

*Significant at $p < 0.05$ level.
**Significant at $p < 0.10$ level.
***Significant at $p < 0.01$ level.

and strong demands for those accounting procedures. Government regulatory authorities or standard-setters in China should pay attention to the needs of the accounting beneficiaries and make necessary amendment to the existing accounting regulations or accelerate the implementation of the proposed detailed accounting standards to accommodate the mounting demands in practice. This development should contribute to enhance international understandability and comparability of Chinese accounting and to bridge the gap between accounting practices in China and other parts of the world.

Accounting standards are associated with economic consequences (Zeff, 1978). Accounting numbers will affect the welfare of various interest parties. Different interest parties would possess varied perceptions and preferences of the given accounting alternatives (Solomons, 1991). Various interested parties in China, such as government, business managers, investors or creditors and accountants and auditors, may hold different views towards conservatism owing to the differences in their self-interest. In particular, Chinese economy has become much diversified. Non-state-owned economy expanded substantially thanks to the growth of the economic reforms commenced in the late 1970s. Users in different economic sectors may now have specific information needs and preferences over accounting alternatives. Thus, we run one-way ANOVA tests in order to analyze the differences in the perceptions of conservatism among the five groups of respondents. In addition, a nonparametric test (Kruskal–Wallis Chi-squares) has also been performed to ensure the robustness of data analysis contextual to the relatively small sample sizes. We ran this nonparametric test because it is very powerful for statistical analysis even for sample data with less stringent assumptions (Siegel and Castellan, 1988). Both ANOVA and Kruskal–Wallis tests have yielded consistent results as shown in Table 2.

According to Kruskal–Wallis (Chi-squares) test results, there are statistically significant differences among the group means of business accountants/managers, governmental officials, institutional investors and bank officers, public practitioners, and accounting educators with respect to some survey questions (e.g., Questions 1.1, 1.3, 2.1, 3.1, 3.2 and 3.4). To Question 1.1, the government respondents have expressed greater concerns on the potential negative impact on business income. They were inclined to a limited and restrictive application of the conservatism convention. Respondents of auditors, bank officers and investment analysts were more liberal towards the application of this accounting convention. The evidence can be verified by responses to Question 2.1 as government respondents expressed a greater demand for differentiated adoption of the convention in business entities with varied ownership structures or business lines. This can be interpreted as that the restrictive application differentiated by business ownership structure or industry would mainly facilitate the government's administration of business enterprises, even at the expense of the comparability of accounting information generated by different enterprises. Investors, creditors and auditors were not in favor of the existing practice of restrictive application of conservatism in Chinese accounting.

As indicated in Table 3, business accountants/managers and auditors disagreed more strongly with the statement that conservatism could not represent fairly the business financial position and operating results as their group means are lower than the overall means (Question 1.3). The views of bank loan officers and investment analysts were more rejective than that of governmental respondents. This implies that the prejudices against conservatism in China come mainly from government authorities at the moment. The findings support the contention that the reluctance of governmental authorities to relinquish control over business financing and accounting may be one of the major obstacles to the application of conservatism in Chinese accounting standards and practices. In addition, to the survey question of whether or not the new business accounting system introduced in 1993 has sufficiently embodied the conservatism concept (Question 3.1), business accountants/managers, and bank loan officers and investment analysts have expressed relatively stronger dissatisfaction, comparing to government respondents, with the existing accounting standards in respect of the application of the conservatism convention.

Although most respondents support increasing adoption of conservatism in Chinese accounting standards, business accountants/managers and auditors (Chinese CPAs) demonstrated stronger demands. For instance, regarding a number of the internationally accepted conservative accounting alternatives such as provision for inventory price-drops, accelerated depreciation, recognition of the impairment of long-term investments, and allowance for doubtful accounts, the means of these two groups are consistently greater than that of government officials and others. The responses to those questions relating to our third study proposition also indicated that the existing Chinese accounting regulations or standards have fallen behind the needs in practice. The governmental authority in charge should consider an early introduction and implementation of the proposed detailed accounting standards to all types of business entities in China.

In order to examine whether differences in business ownership or government administrative patterns would affect the users' perception of conservatism, we further divided the business accountants/managers group into two subgroups as the SOEs and the

**Table 3.** Descriptive Statistics by Groups of Respondents

| | *Overall (n = 198)* | | *Enterprises (n = 71)* | | *Government (n = 51)* | | *Bank and analysts (n = 21)* | | *CPAs (n = 30)* | | *Educators (n = 25)* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | *Means* | *SD* | *Means* | *SD* | *Means* | *SD* | *Means* | *SD* | *Means* | *SD* | *Means* | *SD* |
| Proposition 1 | | | | | | | | | | | | |
| Question 1.1 | 3.309 | 1.307 | 3.310 | 1.282 | 3.490 | 1.361 | 2.810 | 1.209 | 2.897 | 1.235 | 3.840 | 1.180 |
| Question 1.2 | 3.071 | 1.264 | 3.099 | 1.300 | 3.098 | 1.315 | 2.239 | 1.300 | 2.793 | 1.207 | 3.120 | 1.129 |
| Question 1.3 | 2.367 | 1.171 | 2.286 | 1.118 | 2.588 | 1.203 | 2.333 | 1.197 | 1.931 | 0.961 | 2.680 | 1.345 |
| Proposition 2 | | | | | | | | | | | | |
| Question 2.1 | 2.847 | 1.406 | 2.901 | 1.321 | 3.476 | 1.470 | 2.726 | 1.401 | 2.276 | 1.333 | 3.080 | 1.498 |
| Question 2.2 | 3.600 | 1.281 | 3.638 | 1.236 | 3.765 | 1.242 | 3.524 | 1.436 | 3.414 | 1.452 | 3.442 | 1.193 |
| Question 2.3 | 3.401 | 1.398 | 3.298 | 1.463 | 3.600 | 1.241 | 3.508 | 1.012 | 3.467 | 1.053 | 3.440 | 1.261 |
| Proposition 3 | | | | | | | | | | | | |
| Question 3.1 | 3.240 | 1.136 | 3.571 | 1.057 | 3.019 | 1.140 | 2.880 | 1.013 | 3.001 | 1.069 | 2.880 | 1.013 |
| Question 3.2 | 4.268 | 0.953 | 4.394 | 0.870 | 4.235 | 0.839 | 4.762 | 0.436 | 4.200 | 1.096 | 3.640 | 1.221 |
| Question 3.3 | 3.709 | 1.196 | 3.579 | 1.194 | 3.867 | 1.552 | [a] | [a] | 3.933 | 1.081 | 3.630 | 1.114 |
| Question 3.4 | 4.016 | 0.917 | 4.035 | 0.906 | 3.335 | 0.816 | [a] | [a] | 4.100 | 0.959 | 3.680 | 0.900 |
| Question 3.5 | 4.015 | 1.168 | 4.018 | 1.203 | 3.933 | 1.438 | [a] | [a] | 4.200 | 0.997 | 3.840 | 1.143 |
| Question 3.6 | 3.929 | 1.055 | 4.017 | 1.026 | 3.733 | 1.486 | [a] | [a] | 3.867 | 1.074 | 3.920 | 0.812 |

A large portion of respondents in the bank officers and investment analysts group did not fill in the questions regarding the specific conservative accounting alternatives in the returned questionnaires. Thus, this group is not included in comparative analysis in respective of those specific accounting alternatives.

**Table 4.** Mann–Whitney Tests of Means Between Subgroups of SOEs and PLCs

| | *SOEs (n = 34)* | | *PLCs (n = 29)* | | | |
|---|---|---|---|---|---|---|
| | *Means* | *SD* | *Means* | *SD* | *Z-value* | *P-value* |
| Proposition 1 | | | | | | |
| Question 1.1 | 3.552 | 1.270 | 3.177 | 1.241 | −1.190 | 0.234 |
| Question 1.2 | 3.483 | 1.271 | 2.919 | 1.239 | −1.782 | 0.075** |
| Question 1.3 | 2.324 | 1.036 | 2.179 | 1.150 | −0.858 | 0.391 |
| Proposition 2 | | | | | | |
| Question 2.1 | 3.058 | 1.229 | 2.724 | 1.411 | −1.150 | 0.250 |
| Question 2.2 | 3.529 | 1.284 | 3.778 | 1.187 | −0.669 | 0.504 |
| Question 2.3 | 3.080 | 1.498 | 3.500 | 1.453 | −0.998 | 0.318 |
| Proposition 3 | | | | | | |
| Question 3.1 | 3.735 | 0.963 | 3.357 | 1.161 | −1.215 | 0.224 |
| Question 3.2 | 4.379 | 0.979 | 4.412 | 0.821 | −0.259 | 0.795 |
| Question 3.3 | 3.080 | 1.255 | 3.929 | 1.016 | −2.526 | 0.012* |
| Question 3.4 | 3.800 | 1.002 | 4.321 | 0.670 | −2.154 | 0.031* |
| Question 3.5 | 3.840 | 1.280 | 4.286 | 1.049 | −1.543 | 0.123 |
| Question 3.6 | 3.641 | 1.221 | 4.357 | 0.731 | −2.379 | 0.017* |

*Significant at $p < 0.05$ level.
**Significant at $p < 0.10$ level.

PLCs for a comparative analysis. Nonparametric Mann–Whitney–Wilcoxon two-tailed test was run to analyze whether the views of the respondents in the two subgroups have differed significantly in respective of the applicability of the conservatism accounting convention in China. Statistical test results for the two subgroups are presented in Table 4.[8]

Apparently, there are statistically significant effects in the means of the two subgroups for a few survey questions (i.e., Questions 1.2, 3.3, 3.4 and 3.6). The findings can be interpreted as that accountants/managers in SOEs were more conscious of the potential negative effects of conservatism on the state's taxes and fiscal revenues while respondents of PLCs were somehow neutral regarding this concern (Question1.2). However, The latter were much strongly unsatisfied with the existing accounting regulations or standards with respect to the adoption of the conservatism convention. In particular, they disagreed with the differentiated applications by varied business ownership structures. Furthermore, respondents in PLCs were much more in favor of the conservative accounting alternatives such as lower of cost or market (LCM) (Question 3.3), provisions for inventory price drop (Question 3.4), and recognition of the permanent impairment of long-term investments (Question 3.6). To other survey questions, there is no substantial discrepancy in the means of the two subgroups but the means in PLCs group are consistently higher than that in SOEs group. These differences may not only indicate the respondents in PLCs group would have more eager demands for an expanded adoption of conservative accounting procedures, but also explain why the means of the business accountants/managers group for some survey questions as listed in Table 1 (e.g., Questions 1.1 and 3.1) were not significantly different from the government group. Relatively lower means of the SOEs subgroup might have diluted the means of the entire enterprise group.

Although accountants/managers in SOEs may possess a perception more in line with governmental users, their counterparts in the PLCs and other non-government

business entities held a relatively different view. This evidence should have a significant implication. The Chinese government has currently launched a campaign of enterprise reforms with a target to establish a "modern enterprise system" in the country. Following a policy of separating government and business administration, the share-capital (stock companies) system has been set as the direction for the recent round of enterprise reforms. Many more SOEs would be converted into stock companies in near future. Such a development should call for an expanded application of conservatism in Chinese accounting, as revealed by the greater demands from the respondents in the PLC group in this study.

## SUMMARY AND CONCLUSIONS

We conducted an empirical investigation of the perception of conservatism by various interested parties associated with business accounting in China. Based on analysis of survey responses, we found that the majority of the interested parties held no particularly negative attitude against the conservatism accounting convention. The traditional denigration or rejection of this convention in Chinese accounting theories or standards lacked support in practice. In addition, the survey respondents were, in general, unsatisfied with the existing practice of limited or restrictive application of certain conservative or prudent accounting procedures differentiated by business ownership structures or government's administrative patterns. On the contrary, the majority of respondents were inclined to support an expanded adoption of those conservative accounting procedures prevailing in many other countries, as a necessary step to enhance the understandability and international comparability of Chinese accounting. The study results have also revealed that the resistance against the conservatism convention comes mainly from governmental users at present, while business managers, accountants, auditors, bank officers and investment analysts in China were generally in favor of adopting more conservative or prudent accounting alternatives in China.

It should be pointed out that most respondents did understand the potential constraints of conservatism. They were aware of the potential negative impact of this convention on income reported by businesses and on the state's fiscal revenues. However, the result of this study would not support the contention that the conservatism convention should be excluded from application in China at the moment in order to prevent potential manipulations of accounting numbers by business entities (Xiang, 1998). To the contrary, there were substantial demands for an expanded adoption of conservatism in Chinese accounting standards by various interest parties under current business environment in China. Resulting from significant reduction of governmental planning and control and increasing exposures to market pressures, business entities would have to cope with the risks or potential losses stemming from uncertainty in their production, sales, financing or credit activities. It will not be a desirable or feasible solution to the problems of potential manipulation of accounting numbers by simply suspending the application of 'conservatism' in Chinese accounting.

The findings of this study would have positive implications on the development of accounting standards and practices in China. Although conservatism has long been rejected in Chinese accounting, this may mainly result from ideological influences and

can not represent the actual attitude of the users and providers of accounting information in practice. Thanks to a continuing progress of economic reforms, China has moved from a centralized command economy into a market-oriented economy in recent years. The portion of non-state-owned businesses has been expanded rapidly while the number of foreign invested enterprises, PLCs and individual business entities increased sharply. With a much-diversified economy in place, business risks and uncertainty have also proliferated. The majority of various interested parties associated with business entities currently hold eager demands for more prudent accounting procedures that can provide a reasonable basis to deal with risks or uncertainty inherent in business operations. This should lead to an expanded adoption of the conservative accounting alternatives widely applied in most market economies. Government regulatory authority or accounting standard setters in China should fully recognize the changes in business environment and speed up the process of accounting reforms. In particular, concrete efforts must be made to revise the existing accounting regulations or to promptly formulate and enforce the new set of detailed accounting standards to incorporate those conservative accounting procedures demanded by the users and providers of business accounting information. This move will increase the reliability and relevance of accounting information to both domestic and international users, and to narrow the gap between accounting standards or practices in China and other parts of the world. With enhanced understandability and international comparability, business accounting will facilitate an improvement of investment environment for domestic and international investors and a smooth progress of enterprise reforms towards a market economy in China.

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## NOTES

1. The government originally planned to introduce all 30 pieces of the "Detailed accounting standards" in one batch in early 1997. However, the plan has been postponed and only one piece of the detailed accounting standards was introduced in 1997. As a precautionary measure to counteract the effects of the recent Asian financial crisis, the government has to speed up the process of releasing the new accounting standards at present. Six more of the detailed accounting standards (mainly relating to disclosure issues) were pronounced in mid-1998. However, most of the newly pronounced detailed accounting standards would be initially experimented in publicly listed companies. They will be officially enforced to all business entities in another 5 to 10 years.
2. Most business entities are funded and run by various government authorities in China (i.e., SOEs), enterprise revenues and expenses or income reported would directly affect the government's fiscal revenues and expenditures.
3. Judged from the returned questionnaires, most respondents in this group were chief-accountants or the persons in charge of financing and accounting work within individual enterprises. That means that some general managers might have passed the questionnaires to the persons in charge of financing and accounting transactions within their entities.
4. One hundred and fifty copies of the questionnaire were sent to government officials and another 150 to bank credit and loan officers and financial analysts in securities companies.

5. The response rates seem relatively low which may be a limitation of this study. Besides recognizing the difficulty of conducting survey studies in China, caution is necessary for the inference of the study findings. In particular, the bank officers and investment analysts group had yielded a fairly low response rate with substantial missing data relating to a few questions of technical conservative accounting alternatives in the returned survey questionnaires. More specific studies on the use of accounting information in actual loan and investment decisions by bank credit officers or investment analysts may be an interesting topic to investigate in future.
6. In China, the government has run accreditation programs for various technical or professional titles (designations) such as engineers, economists, accountants, auditors, statisticians, asset appraisers, and so on. Varied ranks at junior, intermediate and senior levels are offered within each designation. As the professional titles and ranks serve as the indicators of technical proficiency and seniority associated with varied levels of compensation and benefits, the award of those titles or ranks are mainly determined on seniority on job. The holders of the professional titles or ranks at the intermediate level should normally have 6–10 years of work experience, while over 15–20 years of experience is required for the senior ranks.
7. The means of questions 1.2 and 2.1 are not statistically significant at 0.10 level, which can be interpreted that the respondents have overall held neutral views towards the two questions.
8. We intended originally to examine the differences in the perceptions of conservatism by further breakdown subgroups of the respondents, e.g., comparing the means between SOEs and foreign-invested enterprises, governmental users and external investors or creditors, large or small-size enterprises, or business entities segregated by varied industry lines, and so on. But these tests were not performed owing to low response rates (small sample size) or incomplete data associated with those subgroups. Future studies could be pursued to obtain more thorough and insightful empirical analysis of the applicability of the conservatism convention in Chinese accounting.

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# Pricing of Foreign GAAP Earnings in U.S. Capital Market Prior to the SEC Required Reconciliation Disclosure

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**Key Words:** Earnings announcements; GAAP reconciliation; SEC

***Abstract:*** *The Securities and Exchange Commission (SEC) requires foreign registrants to include in their annual reports on Form 20-F reconciliation to U.S. GAAP of net income, earnings per share, and shareholders' equity, if materially different. Previous research indicates that foreign firms usually file their reports with the SEC near or at the deadline, that is six months after the fiscal year-end and about three months after the earnings announcement. The purpose of this study is to examine U.S. investors' ability to interpret foreign GAAP earnings before the SEC regulated disclosure becomes publicly available. Presented empirical evidence indicates that market participants are able to infer U.S. GAAP earnings from the foreign GAAP earnings at the time of initial earnings announcements.*

The Securities and Exchange Commission (SEC) attempts to overcome the problems of international diversity in the accounting systems of different countries by imposing mandatory reporting requirements on foreign registrants. These requirements include as a minimum, the quantitative reconciliation to U.S. GAAP of net income, shareholders' equity and earnings per share (EPS), if materially different (SEC, 1995). These requirements are strongly criticized by foreign issuers as well as by the U.S. stock exchanges (Power and Salwen, 1991; Frost, 1996; Bayless et al., 1996; Mueller et al., 1997, p. 32). The critics believe that imposed regulation deters foreign firms from listing in the U.S. The main focus of this discussion is the question of whether foreign issuers should be required to provide quantitative U.S. GAAP reconciliations.

This study contributes to this debate by examining the U.S. market's ability to cope with international accounting diversity beyond direct reliance upon SEC assistance. Specifically, the ability of the market to interpret foreign GAAP earnings *before* the SEC regulated disclosure is publicly available in Forms 20-F is investigated, and the information content of both announced foreign GAAP earnings and their inferred U.S. GAAP counterparts is assessed.

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Much of the previous research concentrated only on evaluating the value relevance of the Form 20-F filing event itself. In this study, it is argued that this event is very untimely, relative to the fiscal year-end and the first earnings announcement. Because of this, it is expected that the market, or at least leading experts in the market, namely financial analysts and institutional investors, have had to develop some coping mechanism which would allow them to deal effectively with the international accounting diversity long before the GAAP reconciliation is formally disclosed in the Form 20-F. There is some evidence supporting this view. For example, the global financial services firm of Morgan Stanley Dean Witter (MSDW) applies a new research methodology called *Apples to Apples: Accounting for Value in World Markets* (A2A) to compare companies operating under different accounting regimes. MSDW deliberately do not reconcile to any single accounting standard, such as U.S. GAAP or IAS; instead it recommends a methodology that best reveals the key economics driving the business. Specifically, MSDW recommendations address six accounting issues: (1) depreciation and revaluation of long-lived assets; (2) acquisition and goodwill accounting; (3) pensions and other post-employment benefits; (4) taxation; (5) consolidation and group reporting; and (6) foreign exchange (MSDW, 1998).

This study is based on assumptions of informational efficiency of the international capital markets. While these assumptions are generally accepted by researchers as descriptive in the national markets context, their applicability within the international context is still subject to investigation. Recent studies indicate stronger integration of international capital markets, particularly after the October 1987 stock market crash, as investors tend to give more weight to international factors in making investment decisions (Lee, 1994). World equity markets seem to be at least weak-form efficient (Kohers, 1995; Sewell, 1996; Chan, 1997). Integration of capital markets is particularly evident among European Union countries (Johnson, 1994; Chaumeton, 1996).

Our empirical results will not only show that the U.S. market prefers earnings measured according to familiar U.S. GAAP for valuation purposes, but also suggest that this information is inferred from the foreign GAAP earnings as soon as they are first announced. Furthermore, it can be argued that valuation is enhanced by utilizing two different accounting signals, products of two different accounting regimes, as compared to utilizing one signal alone.

## PREVIOUS RESEARCH

Much of the previous research on the information content of foreign accounting data concentrated on, or at least included, evaluation of the value relevance of the Form 20-F filing event and the findings are inconsistent. Several researchers reported no market response to this event (e.g., Meek, 1983; McQueen, 1992; Amir et al., 1993). Others detected some market reaction when: (1) the Form 20-F filing occurred in the absence, or in advance of, earnings announcements (Oh, 1995; Epps 1997); (2) the total GAAP adjustment was broken down into elements, such as asset revaluation, deferred taxes, or goodwill (Johnson, 1996); or (3) Canadian firms, which are treated differently by the SEC, were included in the sample of foreign firms (Rees, 1995).

Furthermore, it has been noticed that the filing of Form 20-F with the SEC is not a timely event. Meek (1983, 1991) observed that foreign firms usually file their annual reports with the SEC near the deadline, i.e., 6 months after the fiscal year-end. Amir et al. (1993) observed in their sample that the average lag between fiscal year-end and the filing of Form 20-F was about 154 days. Frost and Kinney (1996) and Epps (1997) report a similar mean filing lag of 153 and 160 days, respectively.

Consequently, the authors researching the topic of the earnings-returns relationship for a sample of foreign issuers considered, at least to some degree, the issue of reconciliation predictability. McQueen (1992) stipulated that U.S. GAAP earnings of non-U.S. issuers are likely to be available before the Form 20-F is filed due to three factors: (1) earnings measured according to U.S. GAAP may be occasionally included in the earnings announcements, both in the firm's home country and in the U.S.; (2) annual reports of some firms, which are sometimes distributed prior to the release of Form 20-F, may include footnote disclosure of the reconciliation; and (3) investors may be able to estimate ad hoc U.S. GAAP earnings based on prior years' reconciliation data. Therefore, she expected both foreign GAAP earnings and the U.S. GAAP earnings reconciliation to have information content with respect to security returns prior to the Form 20-F filing date. McQueen's results confirm the expectation that U.S. GAAP earnings are known to the market prior to the Form 20-F filing date.

Pope and Rees (1992) tested an association between U.K. stock returns and alternative U.K and U.S. GAAP earnings over a 12-month event window, for a sample of U.K domiciled companies listed in the U.S. Sensitivity analysis which they conducted indicated strongest explanatory power of their regression for windows terminating in months +3 and +4 from the fiscal year end, and significant drop in this power when the event window terminated in month +6, which is the theoretical deadline for SEC filings of 20-F reports. Pope and Rees suggested that in general the information contained in the 20-Fs is available well before the 6-month deadline date.

The anticipation of the reconciliation numbers was also mentioned by Amir et al. (1993). Specifically, one common element of reconciliation, purchased goodwill, was singled out as predictable upon the knowledge of the size of the acquisition premium for the first year and the amortization period for the subsequent years. Amir et al. argue, that anticipation of certain reconciliation elements diminishes the role of reconciliation as a measure of unexpected earnings and complicates identification of the news in the Form 20-F release.

Few studies concentrated on the information content of annual earnings announcements by foreign issuers of securities traded in the U.S. Meek (1983) was the first who provided empirical evidence indicating that the U.S. capital market responds with comparable intensity to the earnings announcements by non-U.S. and U.S. companies, despite international differences in the accounting systems producing earnings numbers. Extending his prior research, Meek (1991) examined the association of four factors: firm size, magnitude of earnings change, timeliness, and existence of concurrent dividend announcement, with U.S. market reaction to annual earnings announcements for the same sample of 26 non-U.S. multinational corporations used in his 1983 study and for a control sample of U.S. firms. Firm size emerged as the only explanatory variable significant for both samples, while timeliness was significant for non-U.S. firms.

Another study of the effect of differences in GAAP on stock price variability around earnings announcement is that by Lee (1993). His results show that: (1) there is a

significant negative association between the magnitude of stock price reactions to foreign firms' earnings announcements and the level of differences between foreign and U.S. GAAP earnings; and (2) stock price reactions to earnings announcements are larger when both foreign and U.S. GAAP earnings are disclosed simultaneously, as compared to when only one set of earnings numbers is disclosed. Lee concludes, that accounting diversity, although related to a dispersion of investors' beliefs, may have only a second-order impact on investors' portfolio decisions.

Epps (1997) emphasized the effect of disclosure sequence and firms' reporting environment on abnormal stock returns. She was able to detect significant U.S. stock markets' reaction to the preliminary earnings announcements by foreign issuers when these announcements occurred in advance, or in the absence of, Form 20-F filing events. Epps concluded that the U.S. stock markets place more weight on earnings information which is new than on earnings information which is already disclosed through other events.

In the most recent study, Etter et al. (1999) employed intraday trading data and found that annual earnings announcements of non-U.S. and non-Canadian companies listed on either NYSE or AMEX provide information to both institutional and individual investors. The value of the information is greater and the time required to process the information is less for institutional investors. With respect to the Form 20-F filings, abnormal trading activity was not detected surrounding the filing dates for the entire sample period (1983-1992) for either institutional or individual investors.

## RESEARCH DESIGN

Pownall (1993) in her discussion of Alford et al. (1993) suggested that foreign GAAP statements are close substitutes for U.S. GAAP statements if important U.S. GAAP accounting data can be inferred from foreign GAAP reports. Investors' ability to make these inferences and translate foreign GAAP earnings into U.S. GAAP earnings before the latter are formally disclosed can bring about interesting insight into the financial information dissemination process, as well as an assessment of market efficiency in the international context.

In this study it is hypothesized that both, directly observable announced foreign GAAP earnings and inferred U.S. GAAP earnings (usually formally disclosed up to 3 months later in Form 20-F), are correlated with returns observed around earnings announcement. Design of this study is based on the simultaneous alternative signals approach used before by Eichenseher et al. (1991) to test value relevance of alternative income signals measured under the historical cost and current cost conventions.[1]

The alternative accounting signals approach clearly recognizes any complementary or substitution effect that may exist between foreign GAAP and U.S. GAAP earnings. By failing to allow for potentially important interactions between alternative accounting signals, previous studies have ignored substitution and complementary effects that may have affected inferences regarding the incremental information content of reconciliation.[2]

In the context of the proposed study, if the signals are complementary, increases in foreign GAAP earnings accompanied by increases in U.S. GAAP earnings will lead to

higher market price revisions than would be observed if the signals were independent. On the other hand, if the signals are substitutes, increases in foreign GAAP earnings accompanied by increases in U.S. GAAP earnings will lead to lower market price revisions than might be observed if they were independent.

The research hypothesis is stated in the null and alternative forms as follows:

**$H_1$:** The market is unable to infer U.S. GAAP earnings from the announced foreign GAAP earnings and, therefore, the valuation of securities is based on foreign GAAP only.

**$H_2$:** The market is able to infer U.S. GAAP earnings from the announced foreign GAAP earnings and, therefore, the valuation of securities is based on two signals simultaneously.

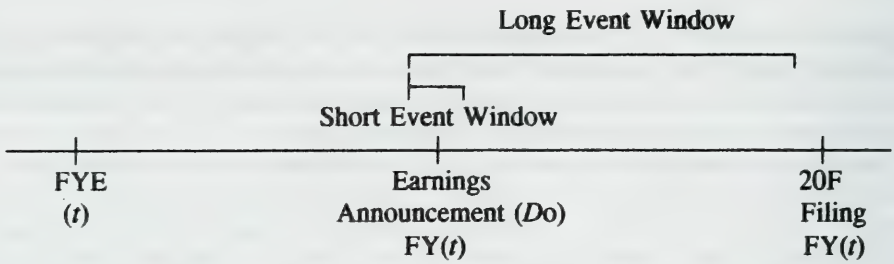
The hypothesis is tested by estimation of the following model (Equation 1):

$$\begin{aligned} \mathrm{CAR}_{jt} = {} & \beta_0 + \beta_1 \mathrm{YC}_{jt}^{\mathrm{F}} + \beta_2 \mathrm{YC}_{jt}^{\mathrm{US}} + \beta_3 D_1^* \mathrm{YC}_{jt}^{\mathrm{F}*} \mathrm{YC}_{jt}^{\mathrm{US}} + \beta_4 D_2^* \mathrm{YC}_{jt}^{\mathrm{F}*} \mathrm{YC}_{jt}^{\mathrm{US}} \\ & + \delta_1 D_1 + \delta_2 D_2 + \epsilon_{it} \end{aligned} \tag{1}$$

where: $\mathrm{CAR}_{jt}$ = cumulative abnormal returns for firm $j$ in event window $t$; $\mathrm{YC}_{jt}{}^{\mathrm{F}}$ = foreign GAAP unexpected earnings scaled by opening price; $\mathrm{YC}_{jt}{}^{\mathrm{US}}$ = U.S. GAAP unexpected earnings scaled by opening price; $D_1{*}\mathrm{YC}_{jt}{}^{\mathrm{F}}{*}\mathrm{YC}_{jt}{}^{\mathrm{US}}$ = first interaction term; $D_2{*}\mathrm{YC}_{jt}{}^{\mathrm{F}}{*}\mathrm{YC}_{jt}{}^{\mathrm{US}}$ = second interaction term; and where: $D_1 = 1$ when $\mathrm{YC}_{jt}{}^{\mathrm{F}} > 0$ and $\mathrm{YC}_{jt}{}^{\mathrm{US}} > 0$; 0 otherwise; $D_2 = 1$ when $\mathrm{YC}_{jt}{}^{\mathrm{F}} \leq 0$ and $\mathrm{YC}_{jt}{}^{\mathrm{US}} \leq 0$; 0 otherwise; $\delta_1$ and $\delta_2$ = shifts in the intercept due to different classes of foreign GAAP and U.S. GAAP earnings signs. $\beta_1$, $\beta_2$, $\beta_3$, $\beta_4$ = coefficients to be estimated; $\epsilon_{it}$ = error term.

Two issues require explanation at this point. First is the issue of an appropriate market index. Several studies provide evidence on a stable structure in the relationships among national stock market indexes of the industrialized world (Philippatos, 1983). As was mentioned before, national stock markets became even more interrelated after the October 1987 crash. Because the indexes are correlated and most of the firms in this study are multinational corporations with share prices affected by international events, the *Center for Research in Security Prices (CRSP)* market index seems to be a suitable proxy for an international index.

CRSP derives two market indexes: (1) value-weighted returns; and (2) equally-weighted returns, but only the latter index includes American Depository Receipts (ADRs).[3] Although foreign securities are traded in the U.S. in three forms: (1) as shares which are issued in the country of the issuer's incorporation; (2) as shares which are issued specifically for trading in the U.S., and (3) as ADRs; most of the non-Canadian foreign firms are traded in the third form. Therefore we have decided to use equally-weighted index in our study. In addition, Johnson (1996) compared an application of CRSP equally-weighted index with application of CRSP value-weighted index and the Morgan Stanley World (MSW) index in a similar research context. The equally-weighted index produced the most significant results providing us with additional argument to use it.




Note: FYE = fiscal year-end; FY = fiscal year;
Short Event Window = *Do*-2 to *Do*+2;
Long Event Window = *Do*-2 to (20-F filing date - 2).

**Figure 1**. Time Line of Events Relevant for Testing Model 1 Over the Short and Long Event Windows

Second is the issue of the window over which returns are cumulated. A regression of returns cumulated over a narrow window around announcements of earnings may understate the usefulness of earnings if the narrow window fails to capture earnings-induced price revisions beyond the window, for example, a delayed investors reaction after the announcement (Lev and Ohlson, 1982). Regressions using a wide window, on the other hand, may overstate the incremental information contribution of earnings, as price changes within the window probably reflect market reaction to a myriad of other timely nonearnings information (Lev, 1989).

In this study, parameters $a_j$ and $b_j$ are estimated from the market model using ordinary least-squares regression over 90 days (days $Do-100$ to $Do-10$) where $Do$ is the earnings announcement day. Residual returns are cumulated for the event windows as in Equation (1b):

$$\mathrm{CAR}_{jt} = \sum_{t=1}^{T} [R_{jt} - (a_j + b_j R_{mt})] \tag{1b}$$

where $T$ denotes the final day of the event window. $\mathrm{CAR}_{jt}$ is cumulated over two event windows: (1) short, for returns for days $Do-2$ to $Do+2$, and (2) long, for returns cumulated from day $Do-2$ to 2 days before filing Form 20-F. The purpose of comparing results for these two windows is to provide evidence on the timing of U.S. GAAP information reaching the U.S. capital market. Fig. 1 provides a graphic representation of the time line of events relevant for this study.

Equation 1 is based on the standard response model where earnings are expected to follow a *random walk* (Equation [1c]) (Watts and Zimmerman, 1986):

$$E(Y_{jt}) = Y_{jt-1} \tag{1c}$$

Based on this assumption,[4] the unexpected earnings to be estimated in Equation 1 can be specified as deflated first differences (Equation [1d]):[5]

$$\mathrm{YC}^{\mathrm{F}}_{jt} = (Y^{\mathrm{F}}_{jt} - Y^{\mathrm{F}}_{jt-1})/P_{jt-1} \tag{1d}$$

where: $Y_{jt}{}^{F}$ = level of reported earnings per share (EPS) of firm $j$ in fiscal year $t$ according to foreign GAAP and in foreign currency;[6] $Y_{jt-1}{}^{F}$ = level of reported EPS of firm $j$ in fiscal year $t - 1$ according to foreign GAAP and in foreign currency; $P_{jt-1}$ = market share price of firm $j$ at the end of year $t - 1$ in foreign currency (opening price for year $t$); and (Equation [1e]),

$$\mathrm{YC}_{jt}^{\mathrm{US}} = (Y_{jt}^{\mathrm{US}} - Y_{jt-1}^{\mathrm{US}})/P_{jt-1} \tag{1e}$$

$Y_{jt}{}^{US}$ = level of reported EPS of firm $j$ in fiscal year $t$ according to U.S. GAAP and in foreign currency; $Y_{jt-1}{}^{US}$ = level of reported EPS of firm $j$ in fiscal year $t - 1$ according to U.S. GAAP and in foreign currency; $P_{jt-1}$ = opening share price in foreign currency.

Dummy variables are required in structuring interaction terms because of the "sign" problem. Specifically, two negative variables yield the same product as two positive variables of the same absolute magnitude. Yet, if the underlying signals are either complements or substitutes, the opposite direction (sign) of the effect on the dependent variable would be expected from the joint negative variables as that from joint positive variables (Eichenseher et al., 1991).[7]

The following null hypotheses is tested:

**H₁**: $\beta_2 = \beta_3 = \beta_4 = 0$

Directional expectations, given that the two accounting signals are substitutes, are:

**H₂**: $\beta_2 > 0$; $\beta_3 < 0$; and $\beta_4 > 0$;

Directional expectations, given that the two accounting signals are complements, are:

**H₂**: $\beta_2 > 0$; $\beta_3 > 0$; and $\beta_4 < 0$;

It is expected that foreign GAAP earnings and U.S. GAAP earnings are correlated since the two GAAP regimes are capturing a high degree of common information. However, they also contain different levels of accruals so that the information content of the two variables should be different. Moreover, because earnings variables in Equation 1 are represented by first degree differences, deflated by price, the potential multicollinearity problem should be reduced.

## ANALYSIS OF EMPIRICAL RESULTS

### Data and Sample Selection

This study covers a 5-year period between 1989 and 1993. In order to identify potential sample firms, the *Compustat* and *Disclosure* data bases were searched for firms incorporated in countries other than the U.S. and Canada.[8] The search yielded 364 firms. Reference to *The SEC Index* and a search through the data base of the

**Table 1.** Summary of Country Distribution of Sample Firms (1989–1993)

| *Country* | *Observations* | *Percent* |
|---|---|---|
| 1. Argentina | 1 | 0.20 |
| 2. Australia | 60 | 11.93 |
| 3. Bahamas | 1 | 0.20 |
| 4. Bermuda | 3 | 0.60 |
| 5. British Virgin Islands | 2 | 0.40 |
| 6. British West Indies | 5 | 1.00 |
| 7. Chile | 4 | 0.80 |
| 8. China | 1 | 0.20 |
| 9. Denmark | 5 | 1.00 |
| 10. Finland | 5 | 1.00 |
| 11. France | 15 | 2.98 |
| 12. Germany | 1 | 0.20 |
| 13. Hong Kong | 5 | 1.00 |
| 14. Ireland | 11 | 2.19 |
| 15. Israel | 21 | 4.17 |
| 16. Italy | 19 | 3.78 |
| 17. Mexico | 15 | 2.98 |
| 18. Netherlands | 38 | 7.55 |
| 19. New Zealand | 10 | 1.99 |
| 20. Norway | 4 | 0.75 |
| 21. Philippines | 11 | 2.19 |
| 22. Portugal | 1 | 0.20 |
| 23. South Africa | 5 | 1.00 |
| 24. Spain | 31 | 6.16 |
| 25. Sweden | 26 | 5.17 |
| 26. United Kingdom | 199 | 39.56 |
| 27. Zambia | 4 | 0.80 |
| Total | 503 | 100.00 |

*Commission's Public Reference Room* in Washington, D.C. confirmed that between 1989 and 1993, 316 of these 364 firms filed Form 20-F or Form 10-K reports with the SEC at least once.

From the population of foreign issuers filing with the SEC, only those filing Form 20-F using foreign GAAP and reconciling material variations from U.S. GAAP were selected. This selection resulted in a preliminary sample of 503 firm-year observations representing firms from 27 countries. Table 1 summarizes the distribution of this sample by country. Firms incorporated in the United Kingdom dominate the sample with almost 40% of the observations. Australia represents a distant second with about 12% of observations.

In the next step, the annual earnings announcement dates for the sample firms were collected. Although the identification of information released in each domestic market was not practical, an attempt was made to pinpoint dates on which the earnings were *first* announced in a major financial newspaper with broad international access. Therefore, the earnings announcement dates were collected from the *Wall Street Journal Index* and the *Annual Index to the Financial Times*.

Table 2 presents results of this search with emphasis on the chronological sequence of events. Not all relevant firm-year earnings were announced in the press, therefore the

**Table 2.** Summary of First Earnings Announcement Dates for Sample Firms (1989–1993)

| | | | *Earnings announcement in both WSJ and FT* | | | | |
|---|---|---|---|---|---|---|---|
| *Year* | *WSJ Only* | *FT Only* | *WSJ Earlier* | *FT Earlier* | *Same Date* | *Total* | *Total* |
| 1989 | 8 | 19 | 1 | 7 | 36 | 44 | 71 |
| 1990 | 8 | 10 | 1 | 13 | 38 | 52 | 70 |
| 1991 | 10 | 10 | 2 | 9 | 45 | 56 | 76 |
| 1992 | 15 | 10 | 1 | 17 | 38 | 56 | 91 |
| 1993 | 25 | 29 | 3 | 21 | 27 | 51 | 105 |
| Total | 66 | 88 | 8 | 67 | 184 | 259 | 413 |
| | (16%) | (21%) | (2%) | (16%) | (45%) | (63%) | (100%) |

number of observations decreased from original 503 to 413. For those announced, more than one third were first published in the *Financial Times (FT)* (21% of announcements were made exclusively in the *FT*, and 16% were made in the *FT* earlier than in the *Wall Street Journal [WSJ]*). Therefore, it seems important for event studies in an international setting to consider both of these major financial information sources.

The list of earnings announcements was further adjusted by exclusion of cases where firms simultaneously disclosed other relevant information within the short window ($Do-2$ to $Do+2$) around earnings announcements. Other relevant information was defined as change in dividend policy, stock splits, sales forecasts, interim earnings announcements (for the first quarter of the next fiscal year), and mergers. There was also one case of pharmaceutical company announcing discovery of a new drug. This requirement was imposed to control for any contemporaneous confounding events. As a result of this requirement, 24 observations were deleted.

In the next phase, all foreign GAAP and U.S. GAAP EPS[9] data were hand-collected from the *SEC File*, the microfiche data base of corporate annual reports and the SEC documents. The same source was utilized to:

1. collect fiscal year-end exchange rates, except in several cases of missing values when the *International Financial Statistics* were consulted;
2. collect ADR ratios; when the ratio was not mentioned in the report, two additional sources were consulted: *Compustat* and the *Universal List of ADR's* developed by the Bank of New York;
3. identify the date when Form 20-F was filed with the SEC; in cases where the SEC stamp on the cover page was missing or illegible, the data base available in the *SEC Public Reference Room* was searched.

Opening fiscal year-end share prices for year *t*, collected from *Compustat*, were used to deflate earnings variables. Because the prices for firms with traded ADRs were provided on a per depository share basis, the ADR ratios were applied to translate them into a per share basis. CRSP tapes were used to provide data on returns.

Additional observations were lost because shares of foreign firms filing annual reports with the SEC were not traded in the U.S., and therefore, the prices were not available.

**Table 3.** Model 1 — Descriptive Statistics and Pearson Correlation Coefficients

| *Variable* | *N* | *Median* | *Mean* | *SD* | *First quartile* | *Third quartile* |
|---|---|---|---|---|---|---|
| $CAR_1$ | 265 | 0.002 | 0.001 | 0.061 | −0.030 | 0.032 |
| $CAR_2$ | 215 | 0.018 | 0.026 | 0.267 | −0.082 | 0.160 |
| $YC^F$ | 337 | 0.000 | −0.000 | 0.287 | −0.031 | 0.013 |
| $YC^{US}$ | 337 | 0.000 | −0.024 | 0.580 | −0.033 | 0.014 |
| $D_1*YC^F*YC^{US}$ | 337 | 0.000 | 0.046 | 0.445 | 0.000 | 0.000 |
| $D_2*YC^F*YC^{US}$ | 337 | 0.000 | 0.024 | 0.149 | 0.000 | 0.001 |
| $D_1$ | 337 | 0.000 | 0.338 | 0.474 | 0.000 | 1.000 |
| $D_2$ | 337 | 1.000 | 0.558 | 0.497 | 0.000 | 1.000 |

| | *1* | *2* | *3* | *4* | *5* | *6* | *7* | *8* |
|---|---|---|---|---|---|---|---|---|
| 1. $CAR_1$ | – | 0.426 | −0.078 | 0.353 | 0.083 | −0.062 | 0.030 | 0.006 |
| | | 0.00 | 0.20 | 0.00 | 0.18 | 0.32 | 0.63 | 0.92 |
| 2. $CAR_2$ | | – | 0.055 | 0.019 | −0.000 | −0.293 | −0.014 | 0.003 |
| | | | 0.43 | 0.78 | 0.99 | 0.00 | 0.84 | 0.97 |
| 3. $YC^F$ | | | – | 0.043 | 0.576 | −0.444 | 0.308 | −0.334 |
| | | | | 0.43 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4. $YC^{US}$ | | | | – | 0.487 | −0.260 | 0.214 | −0.133 |
| | | | | | 0.00 | 0.00 | 0.00 | 0.02 |
| 5. $D_1*YC^F*YC^{US}$ | | | | | – | −0.017 | 0.146 | −0.117 |
| | | | | | | 0.76 | 0.01 | 0.03 |
| 6. $D_2*YC^F*YC^{US}$ | | | | | | – | −0.114 | 0.141 |
| | | | | | | | 0.04 | 0.01 |
| 7. $D_1$ | | | | | | | – | −0.803 |
| | | | | | | | | 0.00 |
| 8. $D_2$ | | | | | | | | – |

*Notes:* $CAR_1$ and $CAR_2$ — abnormal returns cumulated over the short (1) and long (2) windows.

**Table 4.** Model 1 — Contemporaneous Alternative Earnings Measures and their Interaction

(1) $CAR_{jt} = \beta_0 + \beta_1 YC_{jt}^{F} + \beta_2 YC_{jt}^{US} + \beta_3 D_1 {*} YC_{jt}^{F} {*} YC_{jt}^{US} + \beta_4 D_2 {*} YC_{jt}^{F} {*} YC_{jt}^{US} + \delta_1 D_1 + \delta_2 D_2 + \epsilon_{jt}$

Substitutes $H_2$: $\beta_2 > 0$, $\beta_3 < 0$, $\beta_4 > 0$

Complements $H_2$: $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 < 0$

*Panel A: Short Window (N = 265) Coefficients and t-Statistics*

| *Model* | *Intercept* | $\beta_1$ | $\beta_2$ | $\beta_3$ | $\beta_4$ | $\delta_1$ | $\delta_2$ | $R^2$ | $F$ |
|---|---|---|---|---|---|---|---|---|---|
| (1a) | 0.001 | −0.017 | | | | | | 0.00 | 1.62 |
| | (0.34) | (−1.27) | | | | | | | |
| (1b) | 0.002 | | 0.035 | | | | | 0.12 | 37.41* |
| | (0.53) | | (6.12)* | | | | | | |
| (1c) | 0.002 | −0.010 | 0.034 | | | | | 0.12 | 18.97* |
| | (0.54) | (−0.76) | (6.01)* | | | | | | |
| (1d) | 0.003 | 0.063 | 0.059 | −0.046 | 0.135 | −0.008 | 0.004 | 0.13 | 7.54* |
| | (0.29) | (1.96)*** | (5.15)* | (−2.54)** | (1.34) | (−0.60) | (0.34) | | |

*Panel B: Long Window (N = 215) Coefficients and t-Statistics*

| *Model* | *Intercept* | $\beta_1$ | $\beta_2$ | $\beta_3$ | $\beta_4$ | $\delta_1$ | $\delta_2$ | $R^2$ | $F$ |
|---|---|---|---|---|---|---|---|---|---|
| (1a) | 0.025 | 0.050 | | | | | | −0.00 | 0.64 |
| | (1.38) | (0.80) | | | | | | | |
| (1b) | 0.026 | | 0.007 | | | | | −0.00 | 0.08 |
| | (1.42) | | (0.28) | | | | | | |
| (1c) | 0.025 | 0.054 | 0.011 | | | | | −0.01 | 0.40 |
| | (1.39) | (0.85) | (0.39) | | | | | | |
| (1d) | 0.029 | −0.197 | −0.070 | 0.108 | −1.811 | 0.005 | 0.014 | 0.07 | 3.67** |
| | (0.58) | (−1.21) | (−1.24) | (1.20) | (−4.17)* | (0.08) | (0.25) | | |

*Notes:* Significance levels: $*p \leq 0.001$; $**p \leq 0.01$; $***p \leq 0.05$

Also, one observation was excluded because the firm announced its earnings in U.S. GAAP.[10] In the following sections, each of the reported test results is accompanied by the relevant number of observations.[11]

## Results of the Tests of Hypotheses

Table 3 contains descriptive statistics and a bivariate correlation matrix for the variables used in Model 1. Earnings variables are expressed in foreign currency and deflated by opening share price in the same currency.[12] The table shows a mean (median) CAR over the short window of 0.1% (0.2%) and over the long window of 2.6% (1.8%). Earnings changes expressed in foreign GAAP ($YC^F$) and U.S. GAAP ($YC^{US}$) differ markedly with means of −0.0002 and −0.0236, respectively and they are not significantly correlated. These negative means reflect a recessionary economy of the early 1990s. The strongest correlations observed in Table 3 are between the earnings change variables and the interaction terms. Inspection of the correlation matrix leads to the conclusion that $YC^{US}$ is significantly correlated with the short window cumulative abnormal returns ($CAR_1$) (coefficient of 0.35 is significant at 1% level), while $YC^F$ is not significantly correlated with $CAR_1$.

Model 1 was developed to test the hypothesis that U.S. GAAP earnings can be inferred from the announced foreign GAAP earnings and both measurements ($YC^F$ and $YC^{US}$)

explain variation in the CAR observed around the earnings announcement. Consequently, the valuation of securities is based on two simultaneous earnings signals and the interaction between them.

Results of regressions of CAR on foreign and U.S. GAAP earnings changes ($YC^F$ and $YC^{US}$) over the short and long windows are presented in Table 4. These results confirm the preliminary conclusion from the correlation matrix.

Over the short window, $YC^{US}$ is significant at the 0.1% level when it is either alone in the model (Model 1b) or with $YC^F$ (Model 1c). Introduction of the interaction terms between $YC^F$ and $YC^{US}$ (Model 1d) improves the overall goodness of fit of the model. The adjusted $R^2$ increases and coefficients of two other variables show statistical significance: (1) the interaction term for joint positive earnings changes ($\beta_3$) at the 1% level, and (2) the change in foreign GAAP earnings ($\beta_1$) at the 5% level. The results indicate that null $H_1$ should be rejected and it can be concluded that the market is able to promptly infer U.S. GAAP earnings from the announced foreign GAAP earnings. Furthermore, inspection of the signs of the coefficients shows, that changes in foreign GAAP earnings ($YC^F$) and U.S. GAAP earnings ($YC^{US}$) are used by the market as substitutes.

Over the long window,[13] Model 1 loses almost half of its significance and its goodness of fit. Among the independent variables, only the second interaction coefficient ($\beta_4$), representing joint negative earnings changes, is significant. This may indicate, that information about earnings resonates longer across the market when both earnings variables are negative, i.e., a given firm experienced worsening of results whether it was measured by its domestic GAAP or by the U.S. GAAP. Lack of significance for either earnings change variable supports the argument that this information is instantly impounded into prices at the time of the first earnings announcement.[14]

Several diagnostics were used to detect presence of multicollinearity among independent variables.[15] These diagnostics suggest that although mild multicollinearity is present, it is not a problem.

## SUMMARY OF RESULTS AND CONCLUSIONS

We tested whether U.S. capital market participants are able to infer U.S. GAAP earnings from the announced foreign GAAP earnings before foreign issuers disclose reconciliation of their reported earnings to U.S. GAAP in Forms 20-F filed with the SEC. The simultaneous alternative accounting signals approach was applied and the analysis was based on standard assumptions about the association between returns and earnings, using the first differences as proxies for unexpected earnings.

Results of this study indicate that U.S. capital market participants are able to interpret foreign GAAP earnings and promptly infer from them U.S. GAAP earnings. Consequently, valuation of securities around the time of foreign GAAP earnings announcements is based on two accounting signals: (1) announced foreign GAAP earnings; and (2) inferred U.S. GAAP earnings; as well as on an interaction between them. Moreover, inferred U.S. GAAP earnings are more important in explaining abnormal returns than actually announced foreign GAAP earnings. Although further research is required, these results may be interpreted as empirical evidence of semi-strong efficiency of capital markets in the international context.

Our findings allow for at least two important conclusions. First, market participants have apparently developed a coping mechanism in dealing with accounting diversity. Since the filing of Form 20-F, including the reconciliation of material variations from U.S. GAAP, is such an untimely event, therefore market participants are forced to act on their own. They seem to utilize other sources of information, such as previous years reconciliations and interim reports, and apply their *multiple principles capability (MPC)*[16] in order to approximately restate the earnings numbers.

Second, although foreign GAAP earnings appear to substitute for U.S. GAAP earnings in the valuation process, U.S. investors prefer to use performance indicators measured according to the familiar accounting standards. The results may also indicate that the valuation of securities is enhanced by utilizing a dual measurement system. The accounting numbers are presented in two dimensions and, thus, more useful information is being provided. The original foreign GAAP financial statements reflect better the economic environment in which a firm operates, while the U.S. GAAP adjustments help U.S. investors to conduct a comparative analysis of performance.

This study only considered earnings variables even though the SEC requires the reconciliation of earnings as well as shareholders' equity. Previous studies, however, have reported a weaker market reaction to book value reconciliations than to earnings reconciliations (e.g., McQueen, 1992; Johnson, 1996). Thus, in this study it was elected to concentrate exclusively on earnings.

Another possible limitation was imposed by the sample size. The sample was not large enough to allow for control of GAAP differences between countries or groups of countries. Consequently, the test suffers from the loss of power due to cross-sectional diversity in GAAP.

Future research should concentrate on sources of information other than Form 20-F. The U.S. GAAP numbers are seldom announced or referenced to in the financial press.[17] The most obvious alternative to the Form 20-F would be the annual report prepared by non-U.S. firms for their stockholders. Amir et al. (1993), however, reported that over 90% of the firms in their sample[18] either filed annual reports even later than Form 20-F, or did not file at all. In only 6.6% of the cases were annual reports containing the reconciliation of accounting differences received prior to Form 20-F. It would be interesting to see if this reporting trend persists in the 1990s.[19] Another important source of information to consider would be interim reports. Usefulness of these reports for approximation of U.S. GAAP earnings should be researched.

The most promising approach to investigate these issues would be to inquire of market participants, such as financial analysts, institutional investors, managers of mutual funds, etc., about their experiences in dealing with international accounting diversity.[20] In this inquiry, the process of earnings approximation at the time of their announcement in foreign GAAP would be of prime interest, and could potentially provide important guidelines for investors.

## NOTES

1. In the previous studies on value—relevance of foreign GAAP earnings researchers predominantly used the earnings decomposition approach; they analyzed information content

of earnings reflecting foreign GAAP and U.S. GAAP (reconciliation) components (see, for example, McQueen, 1992; Pope and Rees, 1992; Amir et al., 1993).

2. In the context of information content, whenever two accounting signals are substitutes for, or complements of each other, the marginal effect of one variable on returns will depend on the value of the other. Two accounting signals are perfect substitutes if the return distributions conditional on one, the other, or both are identical for all realizations of the two accounting variables. Alternatively, two accounting signals may be strict complements if neither one affects returns when used separately, but return distributions are affected when they are used jointly (Gonedes, 1978).
3. ADRs are negotiable certificates for foreign-based corporations' shares which are held in U.S. banks as American Depository Shares (ADSs). A buyer of an ADR, representing some multiple of one issued share in the U.S., is entitled to the same dividends and capital gains as shareholders purchasing shares on an exchange in the home country of the company.
4. This assumption is reasonable, since research in an international context indicates that the economy-wide factors varying from country to country, as well as the details of the accrual accounting system which also vary between different countries, play a limited role as determinants of the martingale tendency in the annual income numbers (e.g., Little, 1962; Kinnunen, 1991).
5. The opening share price is used throughout the study as the deflator to control for size effect. This deflator is suggested by Christie (1987) as the best way to reduce scale effects in returns studies.
6. Foreign currency in this context means non-U.S. currency. Foreign issuers are required to present their financial statements in the currency of either their country of incorporation or the country of their primary economic environment.
7. When $YC^F > 0$ and $YC^{US} > 0$, a negative value of $\beta_3$ will suggest that $YC^F$ and $YC^{US}$ are substitutes (increases in both accounting measures will result in lower market price revisions than would be observed if they were independent), whereas a positive value of $\beta_3$ will suggest that they are complements (increases in both accounting measures will result in higher market price revisions than would be observed if they were independent). In contrast, when $YC^F \leq 0$ and $YC^{US} \leq 0$, a negative value of $\beta_4$ will suggest that the two accounting signals are complements; whereas a positive value of $\beta_4$ will suggest that they are substitutes. The third class of "earnings signs" is also considered in Model 1. Only one class is predicted for mixed signs of foreign GAAP and U.S. GAAP earnings because: (1) such a situation is rarely observed in the collected data, and (2) the direction of the relationship between the independent variables and the dependent variable in this class could not be determined a priori. Since there are three classes of "earnings signs" only two dummy variables are used in the model. The coefficient for the third dummy variable is set to zero. The least squares estimates for the coefficients of the full model (with as many dummy variables as classes) are indeterminate, because all three dummy variables and the constant have a perfect linear correlation with each other (Murphy, 1973).
8. Canadian companies have been excluded from this study because they are not considered "foreign" by the SEC although they have been allowed in limited circumstances to use the registration and reporting forms for foreign companies (SEC, 1987, p. 16-3). As a result, the majority of Canadian firms have filed Form 10-K. In addition, the SEC entered into a *Multijurisdictional Disclosure System (MJDS)* with Canada. Canadian issuers are permitted to report under the Exchange Act using Canadian disclosure documents and offering practices. The system is effective for firms with debt and preferred stock offerings and extends the reciprocal practices to ongoing disclosures and cross-border tender and rights offers (SEC, 1991).

9. Primary net income per share was uniformly collected for this study. This was the most common type of EPS reported and reconciled. Even firms reporting other types of EPS for domestic purposes (for example British firms report EPS before extraordinary items), usually provided information on a net income basis. In rare cases when this data was not presented, EPS was recalculated using information about net income and the average number of outstanding shares.
10. Approximately 98% of earnings announcements were made in the same GAAP as used to prepare financial statements filed with the SEC. In only 5 cases did reconciling firms announce their earnings in U.S. GAAP. In all these cases but one, observations had missing values, and therefore, were automatically excluded from the analysis. Simultaneous announcements of earnings in foreign GAAP and in U.S. GAAP were not observed in this sample.
11. Preliminary diagnostics consistently indicated five outlying observations. Three of these observations were outlying in terms of dependent variable ($CAR_1$), several hundred times greater than a mean value. These three outlyiers yielded *R*-student ratios with an absolute value greater than four (the highest values were 9.98, 5.25, and 4.22). The other two observations were outlying in terms of independent variables. They were identified by extremely large Cook's Distance measures, indicating very high influence of these cases on all of the estimated regression coefficients (Neter et al., 1990). All these extreme cases warranted further investigation. They were identified as the following firm-year observations (all U.K. firms): WPP Group (1990 and 1991), Attwoods (1991), Saachi and Saachi (1992) and Lep Group (1992). Advertising agencies WPP Group and its competitor Saachi and Saachi experienced extreme financial difficulties in the early 1990s. Both firms posted losses and were under restructuring plans. In case of Saachi and Saachi the loss was believed to be the largest ever for an ad company. Auditors qualified their opinion for WPP Group in 1991, expressing an uncertainty regarding the going concern status of the firm. The freight forwarding Lep Group also posted losses and was under major financial reconstruction carried through during the Fall of 1992. Attwoods, a profitable waste management company, made numerous acquisitions which have affected the comparability of its financial information. Exclusion of all these observations from further analysis resulted in normally distributed residuals for all our models.
12. U.S. opening prices at year $t$ (closing prices at year $t-1$) were translated into foreign currency by application of fiscal year-end exchange rates at year $t-1$.
13. For the long window estimation, returns for 100 trading days before and 100 trading days after the first earnings announcement were retrieved. Because 100 trading days equals about 5 months, all cases of Form 20-F filing within the regulatory limit (6 months from the *fiscal year-end*) were covered. Cases when the Form 20-F was filed after the deadline were automatically excluded as outlying observations obscuring conclusions. For the sample with 235 valid observations, the average number of calendar days between earnings announcement and Form 20-F filing was 80, with a standard deviation of 35 days, a minimum of 5 days and a maximum of 143 days. This confirms the earlier observations that the filing of Form 20-F is very untimely (Meek, 1983, 1991; Amir et al. 1993; Frost and Kinney, 1996; Epps, 1997).
14. Since Model 1 is a special case of a second-order polynomial regression, its full version with quadratic components was also tested over both windows: $CAR_{jt} = \beta_o + \beta_1 YC_{jt}^{F} + \beta_2 YC_{jt}^{US} + \beta_3 D_1{*}YC_{jt}^{F}{*}YC_{jt}^{US} + \beta_4 D_2{*}YC_{jt}^{F}{*}YC_{jt}^{US} + \beta_5 (YC_{jt}^{F})^2 + \beta_5 (YC_{jt}^{US})^2 + \delta_1 D_1 + \delta_2 D_2 + \epsilon_{jt}$. The goodness of fit and significance of the model dropped dramatically, and the joint hypothesis that $\beta_5 = \beta_6 = 0$ could not be rejected for either window. Based on these tests, the quadratic terms were dropped from the model.
15. In addition to the bivariate correlation matrix, the variance inflation factor (VIF) and the condition index were used to detect multicollinearity. Over both windows, none of these

diagnostics exceeded value of 7. Multicollinearity unduly influences the least squares estimates when a maximum VIF value is greater than 10 (Neter et al., 1990). In case of condition index, mild multicollinearity exists if the maximum condition index is between 5 and 10, and severe multicollinearity exists if it exceeds 30 (Belsley et al., 1980).

16. The term *multiple principles capability (MPC)* was introduced by F. Choi (Choi and Mueller, 1992).
17. This study relied entirely on the earnings announced in the printed financial press. Simultaneous disclosure of earnings according to two GAAP regimes was not observed there. In future studies it would be interesting to compare electronic press releases, e.g. on the *Nexis/ Lexis*, with traditional newspaper reports as to whether information from more than one GAAP is released simultaneously.
18. The sample included foreign firms filing Form 20-F and reconciling differences in GAAP for years 1981–1991.
19. In our sample we detected only 7 cases of annual reports with the reconciliation to U.S. GAAP being filed with the SEC prior to Form 20-F. For these observations the longer window ends 2 days before the annual report filing date.
20. Choi and Levich (1991) are leaders in this line of research. They interviewed a wide spectrum of market participants including institutional investors, corporate issuers, underwriters, market regulators, and others in Japan, Switzerland, the U.K., the U.S., and West Germany.

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The International Journal of Accounting

# The Use of International Accounting Standards Terminology, a Survey of IAS Compliance Disclosure

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**Key Words:** International Accounting Standards; International Accounting Standards Committee; Compliance disclosure; Comparability of Financial Statements; IAS; IASC

***Abstract:*** *This study examined where and how companies that purport to be using International Accounting Standards (IAS) are referring to IAS in their financial statements. Virtually all firms surveyed referred to IAS in the footnotes but referred to IAS in the audit report just under 50% of the time. The largest group of companies uses a combination of home-country and IAS standards. A significant number of firms report the use of IAS standards with exceptions. The majority of these firms do not discuss the dollar impact of those exceptions. Referencing IAS with home country standards or exceptions reduces comparability and transparency of financial statements. The International Accounting Standards Committee (IASC) is referenced as the source of IAS in about half of the cases. Failure to reference the IASC as the source of IAS may result in ambiguity concerning what IAS means.*

Globalization of the world economy has resulted in companies striving to raise capital in the global market place. This in turn has led to a call for worldwide comparable financial statements to facilitate the free flow of capital across national borders.

A recent study by the Financial Accounting Standards Board (FASB) had the following to say on the subject of the importance of *internationally comparable* accounting standards:

> Global competition has led many firms to look increasingly to new investors markets to finance the expansion and modernization needed to keep pace and advance in world markets. Likewise, investors look increasingly to other countries to broaden their investment opportunities and diversify risks. As a result, the need for *internationally comparable* financial statements and, therefore, *internationally comparable* accounting standards, has never been greater. (FASB, 1996, p. 3) [Emphasis added]

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## PURPOSE OF STUDY

The purpose of this study is to examine the financial statements of a number of international companies to determine where and how they refer to International Accounting Standards (IAS) in their financial statements, and to advocate consistency in such references. Consistency is important because if companies use IAS selectively, comparability becomes more difficult, if not impossible.

In the US and many other countries, the accounting standards used in the financial statements are referenced in the audit report. The reader of these financial statements can have confidence that they are prepared in accordance with the basis of accounting stated in the audit report, and can compare them to the financial statements of another company that makes a like reference. Similarly, if a company refers in the audit report to the use of IAS promulgated by the International Accounting Standards Committee (IASC), the investor can compare these financial statements to other companies that make the same reference. However, if a company refers to the use of IAS in the footnotes, but not in the audit report, are the financial statements comparable? If the auditor has chosen not to mention IAS in the audit report does this indicate the financial statements are *not* prepared in accordance with IAS even though the footnotes indicate otherwise? Can we compare financial statements of firms using IAS selectively along with local accounting standards? In addition, can we be assured that a company is actually using IAS if the IASC is not referenced? For the above reasons the financial statements were examined to investigate if there is consistency in the way companies refer to the use of IAS. If there is no consistent pattern then the financial statements may not be comparable.[1]

The remainder of this paper is organized as follows:

- A discussion of the primary methods that have been advanced to ease the cross-border listing of securities
- The classification of companies into categories, classes and cases dependent upon where and how they reference IAS in the audit report and footnotes to the financial statements
- A discussion of the results of the study, and
- Summary, conclusion, and recommendations.

## METHODS TO FACILITATE CROSS-BORDER LISTINGS OF SECURITIES

Three primary methods have been advanced to ease the problem of cross-border listing of securities: mutual recognition, reconciliation to home-country generally accepted accounting standards, and the use of IAS.

### Mutual Recognition

Under mutual recognition, the financial statements of country A, prepared under its accounting standards, would be acceptable for listing in country B, and vice versa. Under such circumstances, a German firm listed on the Frankfurt stock exchange would be able to list on a US stock exchange using German GAAP. US companies would be able to list

on German stock exchanges, using US GAAP. This arrangement has the appeal that each country would maintain sovereignty over its financial accounting reporting standards. A disadvantage is that investors in each country would have a difficult time analyzing and interpreting the other country's GAAP. This dilemma is further complicated when the financial statement focus in different countries is considered. For example, in Anglo-Saxon countries (such as the UK and US) the major focus of financial statements has been on providing information to investors. There is a shareholder and disclosure emphasis. Financial accounting is separate from tax accounting, and professional accounting standards have been developed. In other countries, such as Germany and Japan, tax and other governmental rules are the major influence on the accounting system. There is a creditor focus and much less transparency.[2] Because of these complexities, the use of mutual recognition may increase the lack of comparability and impede the flow of capital.

### Reconciliation to Home Country GAAP

Reconciling to home country GAAP is a method that has been widely used. In the US, the Securities and Exchange Commission (SEC) requires companies that wish to be listed on a US stock exchange to reconcile their home country financial statements to US GAAP. This method has some appeal, but has political problems. When Daimler-Benz was listed on the New York Stock Exchange and reconciled to US GAAP, there were many in Germany who were dismayed by the move and looked upon it as subjugating German accounting standards to those of the US. A resistance to the use of US GAAP has grown worldwide. Many feel reluctant to delegate the setting of their standards to the US (Radebaugh et al., 1995). Others see US standards as "too detailed and legalistic." For this and other reasons, a third method of cross-border listing, namely, IAS, has been gaining increasing acceptance.

### International Accounting Standards

The organization that has taken the lead in the development of a set of global accounting standards is the IASC. Established in 1973, its membership is composed of accountancy bodies from more than 90 countries. The objectives of the IASC are as follows [IASC Constitution, 2]:[3]

a. to formulate and publish in the public interest accounting standards to be observed in the presentation of financial statements and to promote their worldwide acceptance and observance, and
b. to work generally for the improvement and harmonization of regulations, accounting standards and procedures relating to the presentation of financial statements.

The IASC has entered into an agreement with the International Organization of Securities Commissions (IOSCO) to develop a core set of IASC accounting standards. The membership of IOSCO is made up of securities regulators in the various countries. For example, the US member is a representative from the SEC. Upon successful

completion of a comprehensive core set of high quality standards the Technical Committee of IOSCO will recommend endorsement of IASC accounting standards for cross-border capital raising and listing of securities in all global markets. The IASC completed these standards in December 1998.

There is no guarantee that IOSCO will approve the IASC standards, however. The IOSCO vote for acceptance of IASC standards must be unanimous. Thus, if the SEC does not vote to accept the standards, IOSCO would not be able to endorse them. The SEC, although expressing support for the efforts of the IASC, has identified three key elements that must be met before it will consider allowing foreign issuers to use IASC accounting standards in securities offerings in the US. These elements are as follows (Sutton, 1997, pp. 98, 99):

1. **A core set of standards.** IASC standards should include a core set of accounting pronouncements that constitute a comprehensive generally accepted basis of accounting.
2. **Comparability and transparency.** The standards must be of "high quality." They must result in comparability and transparency, and they must provide for full disclosure.
3. **Rigorous interpretation and application.** High-quality financial reporting requires rigorous interpretation and application of accounting standards.

In a recent report to Congress, (SEC, 1997, p. 16) the SEC stated that if IASC standards were not judged to be comparable in quality to US standards,[4] their adoption for use by foreign registrants would result in

1. investors questioning the transparency of financial reporting in US markets, resulting in a reduction in the stability of the markets or reduction in the efficiency of pricing of capital for both domestic and cross-border issuers;
2. domestic registrants being put at a competitive disadvantage because application of US accounting and reporting requirements would impose higher disclosure requirements on them than on foreign enterprises competing for capital in the same markets.

In addition, recent changes made by the IASC to some of its core standards (for example, those concerning development costs and goodwill) may not be acceptable to all IOSCO members. This makes obtaining a unanimous vote more difficult.

On a positive note, the European Union (EU) has expressed its support for the IASC. The EU sends a nonvoting representative to participate in all IASC Board discussions and is a member of the IASC Consultative Group that advises IASC Board members on agenda projects, priorities and technical issues. The Fourth and Seventh EU Directives dealing with the format and content of financial statements and the presentation of group (consolidated) financial statements respectively, have done much to improve financial reporting in the EU. A Task Force set up by the EU found the Directives to be compatible with IAS in all but a few minor cases (EU Website, 1998). Indeed, in some EU countries, France and Germany for example, multinational companies are allowed to use IASC standards in preparing their consolidated or group financial statements. In Germany the

law allows companies to use IASC standards or US GAAP to satisfy domestic requirements. (FT World Accounting Report, June 1997, p. 6).

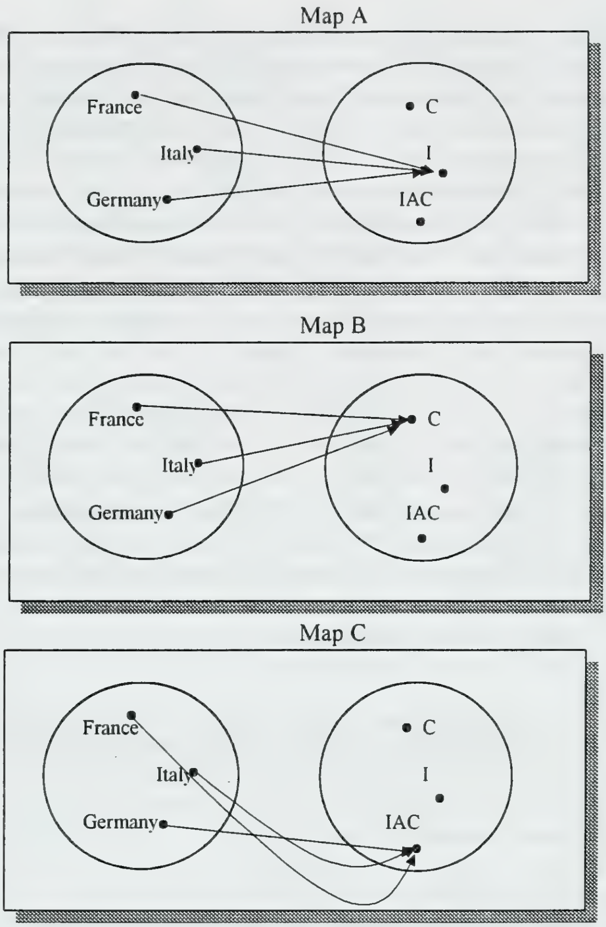
Another positive note is a 1996 survey by the IASC that showed that many countries either use the IASC standards as their national standards or develop standards that are largely based on IASC standards (IASC Website, 1998, IASC.org.uk).

In recent years, firms from countries around the globe have begun to reference IAS in their financial reports. However, it is not clear what it means when a company refers to the use of IAS. We cannot be sure that the standards are those promulgated by the IASC. If a German company uses German GAAP and US GAAP in preparing its financial statements this can be construed as using "International Accounting Standards." The term "International Accounting Standards" has not been copyrighted, so firms are free to use this endorsement any way they like. While the use of IAS *seems* to imply IAS promulgated by the IASC, there is no requirement that this be the case. Indeed, many companies referring to the use of IAS failed to comply with all of the IASC requirements. The *World Accounting Report* has been monitoring financial statements published by major corporations that have been prepared utilizing IASC standards and has identified a significant number of examples of nonconformity with IASC pronouncements.[5] Because of the potential abuse outlined above, the IASC revised IAS1, "Presentation of Financial Statements."

Effective July 1998, the statement requires that

> An enterprise whose financial statements comply with International Accounting Standards should disclose that fact. Financial statements should not be described as complying with International Accounting Standards unless they comply with all the requirements of each applicable standard and each applicable Interpretation of the Standing Interpretations Committee.[6] (AICPA, 1998)

Even if the use of IAS is meant to refer to standards promulgated by the IASC it would be a mistake to assume that firms reporting use of IAS have necessarily increased the comparability and transparency of their financial statements. Consider the following analysis: The countries of the world can be thought of as a Set, call this Set A. The comparability of their financial statements can be denoted Set B, where Set B has the following elements: comparability among financial statements (C), incomparable financial statements (I), and incomparable financial statements that *appear* comparable (IAC). The function mapping Set A into Set B is the accounting standards used by the firms. If the accounting standards used are "home-country" standards, *f*(Map A) of Fig. 1, then the financial statements among countries are incomparable to the extent that the standards differ. If the accounting standards used are solely IAS promulgated by the IASC without exceptions, *f*(Map B) of Fig. 1, then the financial statements should be comparable and transparent in the sense described in Note 1. However, if the accounting standards used are a mixture of IAS and home-country standards, or IAS not promulgated by the IASC, or IAS with exceptions then we have financial statements that *appear* comparable and transparent (because of the use of the phrase IAS) but are incomparable to the extent the home country standards differ, the IAS differ or the exceptions to IAS differ.




Set A = {France, Italy, Germany, ..., Countries of The World}
Set B = {Comparable (C), Incomparable to the extent standards differ (I), and Incomparable (to the extent standards differ) but *Appears* Comparable (IAC)} [Comparability of Financial Statements]
*f* = Accounting Standards
*f*(Map A) = Home Country Accounting Standards
*f*(Map B) = International Accounting Standards Promulgated by the IASC
*f*(Map C) = Home Country Accounting Standards and/or IAS with Exceptions or IAS not Promulgated by the IASC

**Figure 1.** Financial Statement Comparability Mappings of Financial Accounting Standards

Therefore, even if one assumes that a reference to IAS implies IAS promulgated by the IASC it would still be erroneous to assume that *any* such use of IAS must lead to greater comparability and transparency. While it is important to understand *what* firms mean by the term IAS, it is equally important, if not more so, to understand *how* firms are using IAS. Are firms using IAS in a manner that increases comparability [*f*(Map B)], or are they using IAS in a manner that decreases comparability [*f*(Map C)]?

Because of the importance the IASC has assumed in the harmonization process and the increasing number of companies that are purporting to utilize IASC standards to prepare

their financial statements, it was decided to determine *where* and *how* the use of international standards was being disclosed in the financial statements. From a user perspective the disclosure of the accounting basis used is important. If the independent auditors attest to the use of the accounting basis in the auditor's report, this adds further assurance to the users.

## DATA SAMPLE

The IASC Website maintains a list of firms that refer to IAS in their financial statements. Each company listed in the IASC Website as of August 21, 1997 was contacted and a copy of its latest financial statement requested. One hundred and twenty–four usable financial statements were received, primarily of 1996 consolidated annual reports.[7]

The financial statements were examined and data gathered from the management reports, the auditor's report and the footnotes to the financial statements. Data gathered included all references to accounting standards (not just IAS).

## CLASSIFICATION OF COMPANIES

Companies were divided into two categories based upon *where* they referred to IAS in their financial statements, three classes based on *if* they referred to IAS only or to other standards as well, and two cases depending on whether the IASC is referenced or not. An explanation of these categories and classes are given below.

### Category 1

Companies that refer to the use of IAS in the footnotes to the financial statements *and* in the audit report were classified as Category 1 companies. The reader of Category 1 financial statements can be assured that not only is the company using IAS, but also an auditor attested to their use. This category may represent a high level of rigor in the application of IAS. Note that these firms may or may not state that these IAS were promulgated by the IASC.

### Category 2

Category 2 companies refer to IAS in the footnotes only. Thus, there is no assurance in the audit report that IAS have been followed and the credibility of the assurance is not as high as in Category 1.

### Class A

These are companies who refer only to the use of IAS. The reader is thus assured that only IAS and no other standards are being used. If only one set of accounting principles is used, comparability can be enhanced.

**Table 1.** Examples of IAS References in the Audit Report and the Footnotes to the Financial Statements

| | *Reference in audit report* | *Reference in footnotes* |
|---|---|---|
| Category | | |
| 1 | ... in accordance with IAS | ... in accordance with IAS |
| 2 | ... in accordance with the Finnish Accounting Act and other rules and regulations governing the preparation of financial statements in Finland. | In accordance with the accounting standards issued by the IASC. Additionally, financial statements have been prepared according to Finnish Accounting Standards (FAS). |
| Class | | |
| A | ... in accordance with IAS | ... in accordance with IAS |
| B | ... in accordance with the IAS of the IASC and the 4th and 7th Directives of the EU and in accordance with the provisions of Swiss Law and the accounting principles of the Listing Rules of the Swiss Exchange | ... in conformity with the current IAS, published by the IASC |
| C | ... in conformity with Italian law governing consolidated financial statements. | The Group's accounting policy respects the requirements of the effective Italian legislation and are consistent with IAS, *except* for IAS 9, which requires that development costs be recorded as an asset on the balance sheet. |
| Case | | |
| I | ... in accordance with the IAS of the IASC and the 4th and 7th Directives of the EU and in accordance with the provisions of Swiss Law and the accounting principles of the Listing Rules of the Swiss Exchange | ... in conformity with the current IAS, published by the IASC |
| II | ... in accordance with IAS | ... in accordance with IAS |

Category 1: Reference to IAS in the Audit Report.
Category 2: Reference to IAS just in the Footnotes.
Class A: References are only to IAS.
Class B: Combination; Some references are only to IAS (e.g., the footnotes may reference just IAS) while other references are to International and home country standards (e.g., the auditor's report may reference IAS and Swiss generally accepted accounting principles).
Class C: References are to IAS with Exceptions. May also reference home country standards as well.
Case I: IAS referenced (Must use IASC or the word Committee).
Case II: No IASC references.

## Class B

Companies in this class use a combination of standards, i.e., IAS, along with home country standards or some other basis such as US GAAP.

Mixing different bases can lead to confusion and less transparency on the part of financial statement users. Mixing bases also increases the complexity level of the information within the financial statements, which makes the statements more difficult to interpret and compare.

**Table 2.** Classification of IAS References

| | | *Category* | | *Class* | | | *Case* | |
|---|---|---|---|---|---|---|---|---|
| *Country* | *N* | *1* | *2* | *A* | *B* | *C* | *I* | *II* |
| Australia | 1 | | 1 | | | 1 | | 1 |
| Bahamas | 2 | 2 | | 2 | | | | 2 |
| Bahrain | 2 | 2 | | | 1 | 1 | | 2 |
| Barbados | 1 | 1 | | 1 | | | | 1 |
| Belgium | 1 | | 1 | | | 1 | | 1 |
| Bermuda | 2 | 1 | 1 | 1 | 1 | | | 2 |
| Botswana | 1 | 1 | | | 1 | | | 1 |
| Canada | 16 | | 16 | | 16 | | 4 | 12 |
| Denmark | 2 | | 2 | 1 | 1 | | 1 | 1 |
| Finland | 5 | 1 | 4 | | 4 | 1 | 1 | 4 |
| France | 10 | 1 | 9 | | 5 | 5 | 8 | 2 |
| Germany | 5 | 5 | | | 3 | 2 | 5 | |
| Ghana | 1 | | 1 | | 1 | | | 1 |
| Hong Kong | 4 | 4 | | | 4 | | | 4 |
| Italy | 8 | 1 | 7 | 1 | 6 | 1 | 7 | 1 |
| Japan | 1 | | 1 | | | 1 | | 1 |
| Luxembourg | 2 | 1 | 1 | | 2 | | 1 | 1 |
| Malaysia | 2 | | 2 | | 1 | 1 | | 2 |
| Malta | 2 | 2 | | 1 | 1 | | 2 | |
| Netherlands | 1 | 1 | | | 1 | | | 1 |
| Norway | 3 | 1 | 2 | | 3 | | 1 | 2 |
| Slovak Republic | 1 | 1 | | 1 | | | 1 | |
| South Africa | 3 | | 3 | | 1 | 2 | 2 | 1 |
| Sweden | 10 | | 10 | 2 | 2 | 6 | 7 | 3 |
| Switzerland | 36 | 34 | 2 | | 24 | 12 | 20 | 16 |
| Zimbabwe | 2 | 2 | | | 2 | | 1 | 1 |
| Total | 124 | 61 | 63 | 10 | 80 | 34 | 61 | 63 |

Category 1: Reference to IAS in the Audit Report.
Category 2: Reference to IAS just in the Footnotes.
Class A: References are only to International Standards.
Class B: Combination; Some references are only to IAS (e.g., the footnotes may reference just IAS) while other references are to International and home country accounting standards (e.g., the auditor's report may reference IAS and Swiss generally accepted accounting principles.)
Class C: References are to IAS with Exceptions. May also reference home country standards as well.
Case I: IASC referenced (must use IASC or the word Committee).
Case II: No IASC references.

## Class C

This class consists of those companies that refer to the use of IAS with exceptions. We call this "cherrypicking," where firms choose the standards they like and disregard those they do not like. For example, a firm may decide to comply with almost all IAS but deviate from IAS by deducting goodwill from stockholders' equity.

## Case I

Companies that make reference to the IASC in their financial statements were classified as Case I. Referencing the IASC removes any doubt about the source of the IAS.

**Table 3.** References to the IASC by Auditor

| | *Total in sample* | *Reference in both audit report and footnotes* | *Reference just in audit report* | *Reference just in footnotes* | *No reference* |
|---|---|---|---|---|---|
| Arthur Andersen | 12 | | | 7 | 5 |
| Coopers & Lybrand | 19 | 4 | | 9 | 6 |
| Deloitte & Touche | 9 | | | 5 | 4 |
| Ernst & Young | 20 | 2 | 1 | 5 | 12 |
| KPMG | 25 | 4 | 1 | 7 | 13 |
| Price Waterhouse | 23 | | 1 | 10 | 12 |
| Non-Big Six | 16 | | | 5 | 11 |
| Total | 124 | 10 | 3 | 48 | 63 |

**Table 4.** References to the IASC by Country

| | *Total in sample* | *Reference in both audit report and footnotes* | *Reference just in audit report* | *Reference just in footnotes* | *No reference* |
|---|---|---|---|---|---|
| Canada | 16 | | 1 | 3 | 12 |
| Denmark | 2 | | | 1 | 1 |
| Finland | 5 | | | 1 | 4 |
| France | 10 | | 1 | 7 | 2 |
| Germany | 5 | 4 | 1 | | |
| Italy | 8 | | | 7 | 1 |
| Luxembourg | 2 | | | 1 | 1 |
| Malta | 2 | | | 2 | |
| Norway | 3 | 1 | | | 2 |
| Slovak Republic | 1 | | | 1 | |
| South Africa | 3 | | | 2 | 1 |
| Sweden | 10 | | | 7 | 3 |
| Switzerland | 36 | 5 | | 15 | 16 |
| Zimbabwe | 2 | | | 1 | 1 |
| All others | 19 | | | | 19 |
| Total | 124 | 10 | 3 | 48 | 63 |

### Case II

Case II was assigned to those companies that use IAS but do not reference the IASC as the source.

Table 1 gives examples of IAS references in the audit report and footnotes to the financial statements.

## RESULT OF STUDY

The responses by country, category, class and case are summarized in Table 2. One hundred and twenty-four financial statements from a total of 26 countries were examined

**Table 5.** Use of IAS with Exceptions

| *Type of exceptions to IAS* |
| --- |
| Goodwill* |
| Sales and income broken down by country** |
| Segment information** |
| Statement of cash flows** |
| Accounting for investments in associated companies by the equity method |
| Associated companies, fixed assets, accumulated depreciation and untaxed reserves, capital loans and extraordinary income/expenses |
| Cash flow information and "certain other disclosures" |
| Development costs |
| Inflation and deferred taxes |
| Interests in joint ventures |
| Long-term provisions and pensions |
| Market risk provisions |
| Observed where "they do not conflict with the accounting and valuation principles of the Germany Commercial Code" |
| Pensions |
| Presentation of income statement and financial instruments |
| Related party transactions |
| Revaluation of fixed assets |
| Sales/leasebacks |
| Sales/leasebacks, interest expense capitalization, revaluation of fixed assets, proposed dividends, and statement of cash flows |
| Segment information and development costs |
| Segment information and goodwill |
| Segment information and interests in joint ventures |
| Translation of foreign currencies and inventories |
| Translation of foreign subsidiaries |
| Unrealized foreign gains |

With the exception of those items with * and **, these represent the exception(s) disclosed by a single firm.
*Seven firms.
**Two firms.

and classified. The country with the largest number of IAS references is Switzerland, followed by Canada, France and Sweden. Although Swiss companies have had a reputation for secretiveness and conservatism, over the last few years many companies have adopted IAS. Increased stock exchange listings and the need to compete for capital on a global scale may have motivated this change.

About half of the companies refer to IAS in the audit report, and the other half in the footnotes only. Only 10 companies reference IAS solely. Most of the companies in the sample (80) refer to more than one basis of accounting. Thirty-four companies refer to the use of IAS with exceptions. The IASC is referenced as the source of the IAS about half of the time (61 firms).

The higher level of assurance for users would be an assertion in the financial statements that IAS promulgated by the IASC have been used. Two additional tables were prepared to determine if there is any pattern to where a company refers to the IASC by auditor and by country. Table 3 presents the results by auditor and Table 4 summarizes results by country.

Note that the "Big-Six" are the primary auditors of IAS referencing firms, but even they seldom reference the IASC. Switzerland and Germany dominate the countries that reference IASC in the audit report. Switzerland, France, Italy and Sweden are responsible for the majority of the IASC references in the footnotes.

Recall that Class C firms referenced IAS but noted exceptions to their use. Table 5 summarizes the exceptions stated in the footnotes. Notice the treatment of goodwill is the most common exception. Most[8] of the firms did not discuss the monetary impact of not complying with IAS.

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

The objectives of this study were to investigate (1) *where* and *how* companies that purport to be using IAS in their financial statements are referring to IAS and (2) to advocate consistency in how they refer to IAS.

Virtually all firms referred to IAS in the footnotes but the companies in the sample referred to the use of IAS in the audit report just under 50% of the time. By far, the largest group of companies uses a combination of home-country and IAS standards and a significant number report the use of IAS standards with exceptions. The majority of these firms do not discuss the dollar impact of the exceptions. By not discussing the dollar impact of the exceptions companies can cherrypick, e.g., choose those standards they like and disregard those that they do not like.

The IASC is referenced as the source of IAS used in about half of the cases. It may be that there is an implied assumption by some that the IAS standards apply only to standards promulgated by the IASC. On the other hand a case can be made that since almost 50% are referring to the IASC as the source of IAS that the term IAS without such a reference may refer to other "international standards" that have general acceptance.

Many firms are using IAS along with home-country standards. Others are reporting a number of unreconciled exceptions to IAS. Inconsistency in how companies are referring to IAS leads to incomparability and a lack of transparency among firms.

It is proposed the firms adopt a consistent method of referring to IAS in their financial statements. Specifically, we propose the following:

1. Companies refer in the footnotes to the financial statements under "significant accounting policies" and in the audit report that the financial statements are prepared "in accordance with IAS promulgated by the IASC."
2. Reconcile the monetary impact of using home country GAAP along with IAS.
3. Include the monetary impact of the exceptions to IAS.
4. Have the external auditor refer to items (2) and (3) in the audit report.

If the companies and the auditors report on the use of IAS as suggested above, then greater comparability and transparency should follow. Reconciliation of monetary impacts should increase the rigor of the interpretation and application of IAS thus providing higher quality financial reporting.[9]

## NOTES

1. Concept 2 (FASB) defined Comparability as:

   > The quality of information that enables users to identify similarities in and differences between 2 sets of economic phenomena.

   Thus, anything that reduces the user's ability to identify similarities and differences, by definition, reduces comparability. Use of inconsistent references that leave the user wondering just what standards have been applied must make it more difficult for the user to identify similarities and differences, at least in the short term. In the long term, the user may be able to identify similarities and differences but only after putting in some effort to understand what standards have been used. Note that, according to the FASB, comparability does not necessarily imply "identical" financial statements. Acceptable alternatives and legitimate interpretations can lead to sets of financial statements that are comparable but not identical.
2. For a more in-depth discussion of the causes of international differences, see Nobes and Parker, 1998, pp. 15–24.
3. For an excellent discussion of the application of IAS to financial statements see Cairns, 1995.
4. A recent study suggests that when companies comply with IAS, the resulting data are as good as or better than when other accounting standards, including US GAAP, are used (Harris, 1995, p. 3).
5. Twenty-six examples of non-compliance were discussed in FT World Accounting Report, June 1997, p. 7. These included, among others, non-disclosure of cost of sales, non-cash transactions in cash flow statements, non-disclosure of industry segment information, non-disclosure of historical cost amounts for revalued assets, deduction of goodwill from shareholders' interests, failure to amortize goodwill, and non-disclosure of foreign exchange gains and losses.
6. We queried the IASC to determine how this was enforced. Paul Pacter of the IASC replied "We rely on the independent auditor to ensure that financial statements are, in fact, in compliance with IAS, much in the same way as the auditor is responsible when a US company says its financial statements comply with GAAP. Also the provisions of new IAS 1 prohibit a company from saying its financial statements comply with IAS unless they comply with all IAS — pick and choose is not permitted."
7. This represents a response rate of about 50%.
8. Three firms did provide monetary reconciliations for at least one of their reported exceptions to IAS.
9. A note of caution, however. The IAS promulgated by the IASC does contain a number of acceptable alternatives and standards are always open to legitimate interpretation. Thus, while greater comparability may be achieved given our suggestions, one should not expect perfect comparability or identical financial statements.

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# The Impact of Institutional Characteristics on Return–Earnings Associations in Japan

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**Key Words:** Japan; Return–earnings associations; Earnings response coefficients; Long-window approach; Cross shareholdings; Foreign ownership; Unrecognized goodwill

***Abstract:*** *In this paper, we report the result of investigation into the impact of institutional characteristics on return–earnings associations in Japan. It is found that the strength of return–earnings associations in Japan is inversely affected by the extent to which a firm's shares are cross-held, the degree of a firm's holding of real estate assets relative to other assets, the amount of a firm's investment in equities of other firms, and the degree of a firm's reliance on debt financing, while it is positively affected by the extent to which a firm's shares are owned by foreign investors. We also provide evidence suggesting that reported earnings are less value-relevant in Japan than in the US, and that the pervasive use of conservative accounting practices in Japan is well manifested in the return–earnings association. Collectively, our results indicate that future research on cross-national differences in the value relevance of accounting disclosures must pay more attention to institutional environments unique to countries concerned.*

Numerous studies have examined contemporaneous associations between market returns and reported earnings for US firms, and have documented that the $R^2$ of return–earnings regressions is, in most cases, about 5%.[1] It is also reported that the multiple applied to earnings in return–earnings regressions, or the earnings response coefficient (ERC), is less than its predicted value, and that it varies over time and across firms (e.g., Komandi and Lipe, 1987; Collins and Kothari, 1989; Easton and Zmijewski, 1989; Easton and Harris, 1991; Kothari, 1992; Collins et al., 1994). While this line of research typically uses a short return window ranging from a few days to 1 year to measure market returns, Easton et al. (1992) (EHO) take a long window approach to examine the ability of accounting earnings aggregated over long periods

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up to 10 years to summarize the information that has arrived in the market over the same periods. They find that the explanatory power of reported earnings on market returns increases drastically as the interval over which earnings are aggregated becomes longer.[2]

In this paper, we aim to investigate the contemporaneous association between market returns and reported earnings for Japanese firms, using the long-window approach of EHO. Our primary objective is to provide systematic evidence on the extent to which some institutional characteristics unique to Japan differentially affect the strength of return–earnings associations. While the Japanese equity market is one of the two largest ones in the world,[3] and Japanese firms operate in a global market, institutional environments in Japan differ significantly from those in the US in several important ways, which may yield significant differences in the return–earnings association between the two countries. Japanese institutional environments that distinguish from the US ones include the prevalence of interlocking ownership of equity shares among affiliated firms (Jacobson and Aaker, 1993; Kang and Shivdasani, 1995; Jiang and Kim, 1998), few restrictions on the equity ownership by foreign investors (Kang and Stulz, 1997), the importance of a firm's holding of real estate assets and/or investment securities in firm valuation (Choi et al., 1983; Wakasugi, 1988; Frankel, 1991), and a firm's heavy reliance on debt financing (in particular, bank loans) rather than equity financing (Bildersee et al., 1990). The existence of these differences in institutional characteristics between the two largest capital markets provides us with a unique opportunity to extend previous US studies such as EHO by incorporating these institutional differences into the analyses of the associations. As such, our analysis focuses on the question of whether, and how, the return–earnings association for Japanese firms is conditioned on: (1) the extent to which a firm's shares are cross-held by corporate shareholders such as financial institutions and other business corporations; (2) the extent to which a firm's shares are held by foreign investors; (3) the percentage of a firm's real estate holdings relative to total assets; (4) the amount of a firm's investment into equity shares of other firms; and (5) the degree of a firm's reliance on debt financing.

In so doing, we adopt the long-window approach of EHO as a vehicle for our empirical analysis for the reasons described below. First, periodic accounting earnings are measured with errors in the sense that the forward-looking market reflects all the value-relevant events in a timely manner while accounting earnings do not (Beaver et al., 1980; Brown et al., 1987). Stated alternatively, accounting earnings for a fiscal year are a result of periodic accounting measurements by applying accrual accounting procedures, thus leading to the delayed recognition of value-relevant events in accounting reports. This creates problems of measurement errors in the independent variable when market returns are regressed on reported earnings. As a result, the ERCs from contemporaneous return–earnings associations over short windows are likely to be biased toward zero (Brown et al., 1987; Kothari and Sloan, 1992).

One way to alleviate this downward bias in the ERC estimate is to regress market returns over a long window upon earnings aggregated over the same period. The revision in the market's expectation is more likely to be reflected into earnings aggregated over long windows (e.g., 10 years) than those over short windows (e.g., 1 year), thus reducing measurement errors in earnings. As such, the use of long

windows enables us to obtain the ERC estimate close to its theoretical value.[4] On the other hand, Beaver et al. (1987), and Collins and Kothari (1989) suggest the reverse regression approach with earnings (market returns) being the dependent (independent) variable as an alternative way to address potential problems of the downward bias in the short-window ERC. However, while it may attenuate the problem of downward bias in the ERC estimates, the use of the reverse regression approach does not help alleviate the problem of the low explanatory power of periodic earnings on market returns, a phenomenon commonly observed in previous return–earnings association studies using the short window approach.[5] Note further that when the reverse regression approach is used, the inverse of the coefficient for returns in earnings–return regressions (called Return Response Coefficients, RRC) is typically interpreted as the ERC. However, as noted by Collins and Kothari (1989), the inverse of RRC represents the upper bound for ERC, not the most likely value of ERC.

In this paper, we adopt the long-window approach of EHO rather than the reverse regression approach because the former is more appropriate than the latter for addressing our research questions: As will be explained later, our research hypotheses are concerned with the impact of various institutional characteristics on *both* the explanatory power and the ERCs of return–earnings associations in Japan.

Second, the low explanatory power of reported earnings on market returns over short windows could arise from potential leads and lags in accounting measurements or the recognition of value-relevant events.[6] The use of the long-window approach mitigates this lead-lag problem, thus increasing the $R^2$ in return–earnings regressions. Indeed, EHO show that the $R^2$ increases dramatically from less than 5% for the 1-year interval to greater than 60% for the 10-year interval.

Third, the use of long windows up to 10 years allows us to effectively control for potential confounding effects of inter-firm differences in accounting measurements. For example, inter-firm differences in depreciation methods would be effectively controlled for if the window length were extended into the useful life of depreciable assets.

Finally, unlike the typical short-window approach, the use of EHO's approach makes it unnecessary to measure earnings expectations and/or to identify earnings announcement dates.[7]

To preview, our results reveal that the strength of return–earning associations, measured by the explanatory power of aggregate earnings for market returns over the 10-year window and the magnitude and significance of ERC, is *inversely* related to the extent to which a firm's shares are cross-held, the degree of a firm's holding of real estate assets relative to other assets, the amount of a firm's investment in equity shares of other (affiliated) firms, and the degree of a firm's reliance on debt financing, while it is *positively* related to the extent to which a firm's shares are owned by foreign investors. As a by-product of this study, we also provide evidence that the ERCs for return–earnings regressions over long windows are higher for our Japanese samples than for the US samples of EHO, a finding consistent with the pervasive use of conservative accounting practices in Japan. Our results also reveal that the $R^2$ for the return–earnings regression is much lower for our Japanese samples than for the US samples of EHO, regardless of the time intervals used for earnings aggregations. The above evidence is consistent with the finding of Hall et al. (1994) that reported accounting numbers are less value-relevant in Japan than in the US.

The rest of the paper is structured as follows: In the next section, we provide a brief review of the literature relevant to our study. In the institutional characteristics in Japan and hypotheses section, we describe institutional characteristics in Japan, and develop research hypotheses. In the test procedure and results section, we explain test procedures used, including a brief description of the EHO model, sample and data sources, and methods for hypothesis testing, and also present empirical results. In the sensitivity analysis section, we examine the robustness of the results. In the final section, we provide a summary and concluding remarks.

## LITERATURE REVIEW

In this section, we provide a brief review of previous research on the value relevance of accounting numbers in the Japanese equity market that is relevant to our study. Sakakibara et al. (1988) and Darrough and Harris (1991) examine the information content of public disclosures in the Japanese equity market, and provide evidence suggesting that market participants in Japan correctly anticipate return implications of earnings and/or management forecasts. Chan et al. (1991) examine contemporaneous relations between excess returns on portfolios of common stocks and several fundamental variables for Japanese firms. They document that fundamental variables such as earnings yields, book-to-price ratios and firm size have the ability to explain excess stock returns on the portfolio level. In a related vein, Bae and Kim (1998) report that accounting fundamentals such as earnings and book value have the ability to predict expected stock returns, suggesting that currently observed prices for Japanese stocks may not fully reflect information contained in published accounting reports. While the aforementioned studies using Japanese data adopt short return windows up to 1 year, Hall et al. (1994) examine and compare return–earnings associations between the US and Japanese markets, using long windows up to 8 years, and conclude that "Japanese stock prices were largely unrelated to fundamental values based on accounting measures for most of the 1980s" (p. 49). As such, the extant evidence on the valuation relevance of reported earnings in Japan is limited and mixed at best, and thus, further research on the issue remains desirable.

While both studies use the long-window approach of EHO, our study differs significantly from Hall et al. (1994) in the following way. Hall et al. compare general (unconditioned) return–earnings associations between the US and Japan. In other words, Hall et al. are primarily concerned with inter-country differences in the value relevance of accounting earnings as reflected in the return–earnings association. Their results suggest that Japanese investors rely much less on accounting information, in particular earnings, than do US investors. In contrast, our study is primarily concerned with the question of whether the return–earnings association in Japan is differentially affected by, or conditioned upon, several institutional (and fundamental) characteristics unique to Japan. In short, Hall et al. assume that cross-sectional return–earnings associations are homogeneous across firms within the country concerned. In contrast, a crucial assumption of our study is that the associations are differentially affected by institutional environments under which firms are operated.

## INSTITUTIONAL CHARACTERISTICS IN JAPAN AND HYPOTHESES

### Interlocking Ownership

An important feature of the Japanese style of corporate governance is the interlocking ownership of equity shares among firms, such as between business partners and their banks. Indeed, this inter-corporate investment has been a driving force which makes it possible for *keiretsus* (large industrial groups) to evolve as dominant players in the Japanese economy (Jiang and Kim, 1998).[8] Evidence shows that about two-thirds of stocks traded on Japanese equity markets, in terms of market values, are cross-owned by corporate shareholders such as affiliated firms and financial institutions (Yasuda and Lin, 1988).

This interlocking ownership structure has important implications for the return–earnings association, or the valuation relevance of accounting earnings, for Japanese firms. In Japan, most of limited liability companies (*kabushiki kaishsa*) whose shares are publicly traded have only a small number of 'disinterested' individual shareholders. It has been argued that large non-individual shareholders (who own stocks through cross shareholdings) hold equity shares not for the sake of short-term capital gains but for maintaining long-term business relations with other companies (Jacobson and Aaker, 1993; Cooke, 1997; Darrough et al., 1998; Jiang and Kim, 1998). In this environment, useful information about a firm's performance and future prospects is more likely to be conveyed to investors through direct communication between large shareholders (e.g., affiliated firms and/or main banks) and management in a timely fashion rather than through published financial reports.[9] This in turn implies that investors in firms whose shares are extensively cross-held would rely less on reported earnings when valuing equity shares but they rely more on non-accounting information that is shared exclusively within the cross-held network.[10] Accordingly, the return–earnings association would be weaker for firms whose shares are extensively cross-held by other firms. To provide empirical evidence on the above arguments, we hypothesize:

**$H_1$:** The strength of the association between market returns and aggregate earnings for Japanese firms, as measured by the explanatory power and the ERC of return–earnings regressions, is inversely related to the extent to which a firm's shares are cross-held by other firms.

### Foreign Ownership

Institutional environments and data availability in Japan allow us to address an interesting question of whether the return–earnings association in Japan is differentially affected by the level of foreign ownership. As noted by Kang and Stulz (1997), Japan is "the only large country that we know for which detailed data on holding by foreign investors are available" (p. 4).[11] In addition, unlike most other countries where shareholdings by foreigners are restricted, there is no binding constraint on foreign ownership in Japan.[12] This means that data on foreign ownership of Japanese stocks

reflect a result of optimal (unconstrained) investment decisions by foreign investors at their own will.

It has been argued that the interlocking ownership — a common practice in Japan — is anti-competitive and exclusionary, in particular, because there is little room for competition among cross-held firms and information is shared exclusively within the cross-held network (Sheard, 1991; Cooke, 1997). Not surprisingly, foreigners have often expressed their complaints that Japanese markets are too tightly knitted to penetrate. Indeed this interlocking ownership feature of corporate control in Japan has been a subject of bilateral talks between the US and Japan as the US government once introduced the subject into the so-called Strategic Impediment Initiatives (Jiang and Kim, 1998).

In this environment, foreign investors in the Japanese equity market may have disadvantages in getting access to important (exclusively shared) information about a firm's future prospects and/or business strategies, and thus, they are more likely to bear the cost of being less informed than cross-owned corporate shareholders. On the other hand, given that most foreign investors in the Japanese equity market are large institutional/professional investors, they may have advantages in processing publicly available information such as information contained in financial statements into private, value-relevant information, and thus, they could easily become successful "information processors" by utilizing their expertise in information processing.[13]

In this paper, we argue that foreign investors in Japan are likely to invest in equity shares of a firm only when the benefit from being an information processor for the firm in which they invest exceeds the cost of being less informed about the firm's future prospects and/or business strategies. Taking into account the superior ability of foreign investors to process public information (e.g., financial disclosures contained in published financial statements) into value-relevant information, the benefit from being an information processor would be higher, and the cost of being less informed would be lower, if foreign investors invest in firms with high-quality accounting reports or financial disclosures. In other words, the net benefit of being an information processor (after netting out the cost of being less informed) increases with the *information quality* of published accounting reports. Put differently, the higher the information quality of published accounting reports is (and thus, the higher is the information quality of reported earnings), the higher is the net benefit of being an information processor. Viewed in this manner, foreign investors (who wish to maximize the net benefit of being an information processor) are more likely to be attracted to firms with high-quality accounting reports and/or other financial disclosures than cross-owned corporate shareholders who have access to non-accounting (inside) information through exclusionary information sharing with managers.[14] As such, the reported earnings number should be more valuation-relevant, and thus, it should be more strongly related to market returns, for firms with high-quality accounting reports than those with low-quality accounting reports. To the extent that shareholdings by foreign investors are positively related to the information quality of accounting reports or financial disclosures, the level of foreign ownership should have a positive impact on the strength of return–earnings associations. To provide empirical evidence on the above argument, we hypothesize the following:

**$H_2$:** The strength of the association between market returns and aggregate earnings for Japanese firms, as measured by the explanatory power and the ERC of

return–earnings regressions, is positively related to the extent to which a firm's shares are owned by foreign investors.

## Unrecognized Goodwill from Real Estate Assets and Investment Securities

Previous research shows that Japanese real estate prices are highest in the world and that there is a positive relation between stock prices and real estate prices in Japan (Boon, 1989; and Frankel, 1991). For instance, Frankel shows that during the last three decades, the Tokyo stock index moved positively with the Japan's urban land prices. Further, French and Poterba (1991) report that despite the significant inter-country difference in price–earnings ($P/E$) ratios, Tobin's $Q$-ratio for Japanese and US firms remained at about the same level during the 1975–1988 period. They also document that the replacement cost of capital assets in Japan increased almost as much as stock prices during the same period. The above evidence suggests that market participants in Japan take into account a firm's holdings of real estate assets when valuing equity shares.

In Japan, values of real estate assets such as land and buildings are recorded at their original acquisition costs, with no supplemental information provided for their current costs.[15] Given that prices of real estate assets in Japan soared continuously from the mid-1970s until the early 1990s (which covers the sample period of this research), the discrepancy between their market and book values inevitably gives rise to the sizable amount of unrecognized goodwill, thus adding downward bias into *reported* earnings (and book value of net assets) for Japanese firms.[16] The bias in reported earnings arising from timing differences in accounting recognition (e.g., accelerated vs. straight line depreciation, and capitalization of R&D expenditures vs. expensing) is likely to diminish as the earnings aggregation period lengthens.[17] In contrast, even if earnings are aggregated over the long period such as 10 years, the bias in reported earnings arising from the discrepancy between the market value of a real estate asset and its book value would not diminish as long as it is not liquidated within the same aggregation period. In short, to the extent that the market value of a firm's real estate holdings continues to rise over time, the bias in aggregate earnings would increase with the length of the earnings aggregation period, which in turn weakens the return–earnings association. In addition, this distortion would increase with the degree of a firm's real estate holdings relative to other assets. To provide empirical evidence on the above argument, we hypothesize:

**$H_3$:** The strength of the association between market returns and aggregate earnings for Japanese firms, as measured by the explanatory power and the ERC of return–earnings regressions, is inversely related to a firm's holding of real estate assets.

As reported in Bae and Kim (1998), about 30% of total assets for a typical Japanese firm are a firm's investment in equity shares of other firms. This high percentage of a firm's holdings of investment securities is due, in part, to the prevalence of cross corporate shareholdings in Japan. Under Japanese GAAPs, investments in equity shares of other firms are valued at original costs unless the original costs are higher than the associated market values. Therefore, a firm's holding of investment securities provides another

important source of unrecognized goodwill for Japanese firms, in particular, because stock prices for Japanese firms continued to shoot up in tandem with real estate prices during most of the 1980s and early 1990s. One may argue that this bias would not be persistent as long as Japanese firms rebalance/liquidate their investment portfolios as often as regular individual investors. However, this would not be the case for Japanese (cross-owned) corporate shareholders because cross shareholdings in Japan remain remarkably stable over the last two decades (Yasuda and Lin, 1988; Prowse, 1992; Bae and Kim, 1998).[18] To examine whether this bias in reported earnings inversely affects the information quality of reported earnings, which in turn lead to a weak return–earnings association, we hypothesize the following:

**$H_4$:** The strength of the association between market returns and aggregate earnings for Japanese firms, as measured by the explanatory power and the ERC of return–earnings regressions, is inversely related to a firm's investment in equity shares of other firms.

## Heavy Reliance on Debt Financing

Using the *short window* approach, both Collins and Kothari (1989) and Easton and Zmijewski (1989) have found that the ERC for US firms is *inversely* related to security beta which in turn determines the required rate of return for investment projects.[19] In contrast, using the *long-window* approach, EHO find that beta has little effect on the $R^2$ (and the ERC) when market returns over the 10-year period are regressed on aggregate earnings over the same period.[20] Therefore, the existing US evidence on the effect of a firm's risk (as measured by beta) on the return–earnings association is mixed. In this study, we aim to provide further evidence on the issue in the Japanese context. In doing so, we choose financial leverage, rather than beta, as a proxy for firm risk because Fama and French (1992), among others, have provided convincing evidence that beta plays little role in explaining cross-sectional variations in average stock returns, casting serious doubt on the validity of beta as a measure of a firm's riskiness.

Relative to US firms, Japanese firms historically have relied more heavily on debt financing (in particular, bank credits) than on equity financing. Empirical evidence shows that the debt–equity ratio is much higher for Japanese firms than for comparable US firms, although this inter-country difference has diminished since the mid-1980s (Choi et al., 1983; Bildersee et al., 1990; French and Poterba, 1991). Bildersee et al. report that during the 1976–1987 period, the average leverage ratio was 5.046 for Japanese firms while it was 1.493 for US firms. A highly levered firm has high financial and default risks, and the market will thus require a higher expected rate of return for such a firm, which in turn weakens the observed return–earnings association as argued by Collins and Kothari (1989) and Easton and Zmijewski (1989).[21] We thus hypothesize:

**$H_5$:** The strength of the association between market returns and aggregate earnings for Japanese firms, as measured by the explanatory power and the ERC of return–earnings regressions, is inversely related to the degree of a firm's reliance on debt financing.

## TEST PROCEDURES AND RESULTS

### EHO Model

To examine the extent to which the strength of the return–earnings association improves as the interval for earnings aggregation lengthens, EHO estimate the following regression model by applying the ordinary least squares (OLS) procedure:[22]

$$y_{Tj} = \alpha_T + \beta_T z_{Tj} + \varepsilon_{Tj} \tag{1}$$

where

$$y_{Tj} \equiv [P_{Tj} + d_{1j}(R_F^{T-1}) + d_{2j}(R_F^{T-2}) + \ldots + d_{T-1j}(R_F) + d_{Tj} - P_{0j}]/P_{0j}$$

$$z_{Tj} \equiv AX_{Tj} + [d_{1j}(R_F^{T-1} - 1) + d_{2j}(R_F^{T-2} - 1) + \ldots + d_{T-1j}(R_F - 1)]/P_{0j}$$

In the above, the variables are defined as follows:

$P_{Tj}$ = the price per common share of firm $j$ at date $T$,
$AX_{Tj} = \sum_{t=1}^{T} x_{tj}$ where $x_{tj}$ represents earnings per share for firm $j$ for the ($t$, $t$ − 1) time period,
$d_{tj}$ = dividends per share paid at date $t$, and
$R_F$ = one plus the risk-free rate of return.

In addition, the dependent variable, $y_{Tj}$, represents market return for a general time interval (0, $T$) under the assumption that dividends paid at dates $t$= 1, 2, ..., $T$ − 1 are reinvested at the risk-free rate. The independent variable, $z_{Tj}$, represents aggregate earnings over the interval (0, $T$), denoted by $AX_{Tj}$, plus earnings due to the presumed investment of dividends at the risk-free rate. As noted by EHO (p. 123), $z_{Tj}$ can be regarded as "the earnings that would have been earned by the firm had it not paid any dividends and instead retained this cash to invest in the risk-free asset."

### Sample and Data Sources

The initial list of Japanese firms for this study is drawn from the universe of all non-financial firms included in the 1995 *Pacific-Basin Capital Market (PACAP) Database* for Japan compiled by the PACAP Research Center, University of Rhode Island. This database includes daily and monthly observations on stock prices and returns, parent-only financial statement data and the composition of ownership on the parent-only basis data for the 1975–1994 period.

Our analysis relies on financial statement data on the *parent-only* basis rather than the consolidated basis for the following reasons: First, parent-only financial statements have traditionally been considered the primary financial statements for Japanese firms (Lowe, 1990; Darrough et al., 1998). Note, for example, tax liabilities for Japanese firms are

**Table 1.** Summary of Number of Sample Observations

| *Sample* | *1975–84* | *1976–85* | *1977–86* | *1978–87* | *1979–88* | *1980–89* | *1981–90* | *1982–91* | *1983–92* | *1984–93* | *Total* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FULL | 993 | 1074 | 999 | 939 | 877 | 857 | 855 | 855 | 859 | 858 | 9166 |
| RANDOM | 159 | 198 | 139 | 109 | 103 | 93 | 103 | 104 | 97 | 106 | 1211 |

*Note:* Samples consist of firms for which annual earnings, dividends, prices and number of shares outstanding are available for at least 10 consecutive years on the 1995 version of the PACAP Japan database. FULL indicates the total number of observations for each 10-year period. RANDOM indicates the number of randomly selected observations in each 10-year period. Each firm contributes only one observation for the random sample.

**Table 2.** Descriptive Statistics and Correlation Matrix for Primary Variables Used for the 10-year Return Window for the Random Sample

*Panel A: Descriptive Statistics*

| *Variable* | *1st Quartile* | *Median* | *3rd Quartile* | *Mean* | *Std. dev.* |
|---|---|---|---|---|---|
| PD | 1.766 | 3.062 | 5.198 | 4.358 | 4.808 |
| AX | 0.337 | 0.598 | 0.952 | 0.717 | 0.711 |
| AD | 0.093 | 0.163 | 0.230 | 0.178 | 0.138 |
| FVS | 0.119 | 0.202 | 0.285 | 0.217 | 0.160 |
| FVF | 0.022 | 0.039 | 0.055 | 0.039 | 0.025 |

*Panel B: Pairwise Correlation Matrix*

| | *PD* | *AX* | *AD* | *FVS* | *FVF* |
|---|---|---|---|---|---|
| PD | 1.000 | | | | |
| AX | 0.431 | 1.000 | | | |
| AD | 0.453 | 0.679 | 1.000 | | |
| FVS | 0.437 | 0.668 | 0.997 | 1.000 | |
| FVF | 0.302 | 0.528 | 0.867 | 0.904 | 1.000 |

*Note*: The sample consists of 1211 randomly selected observations for which annual earnings, dividends, prices and number of shares outstanding are available for 10 consecutive years on the 1995 version of the PACAP Japan database. For each firm *j*, the variables in the table are estimated as: PD = price plus dividends at time $T$ minus price at the beginning of the return period ($P_0$), divided by $P_0$; AX = sum of net earnings per share over the period $T-9$ to $T$, divided by $P_0$; AD = sum of dividends over the period $T-9$ to $T-1$, dividend by $P_{0j}$; FVS = future value of dividends paid over the period $T-9$ to $T-1$, using an interest rate of 6%, divided by $P_0$; and FVF = FVS − PD, divided by $P_0$.

computed based on parent-only financial statements. Second, detailed data on the composition of ownership (e.g., cross corporate shareholdings and shareholdings by foreign investors) that we use in this study are available only on the parent-only basis.

In constructing our samples, we require that a firm must have such data as net income after taxes, dividends, the number of common shares outstanding and stock prices for at least 10 consecutive years. After applying these data requirements, we obtain 9166 firm/10-year interval observations as reported in Table 1. The first row in Table 1 (labeled FULL) reports the number of firms that meet the data requirements for 10-year intervals starting with 1975–1986 and ending with 1984–1993. Note that any given firm can be included in several 10-year samples if the necessary data are available for at least 10 years. Similar to EHO, to minimize possible problems arising from interdependence in the FULL observations, we apply a random selection procedure such that each firm contributes only one observation to the final 10-year sample.[23] The second row in Table 1 (RANDOM) reports the number of firms selected after applying the random selection procedure to the FULL sample.

Panel A of Table 2 provides descriptive statistics for key variables embedded in the EHO model for the Japanese sample of randomly selected 1211 firm/10-year interval observations; Panel B presents the correlation matrix for the same variables. As reported in Panel A of Table 2, both the mean and the median of market returns over the 10-year interval (PD, price plus dividends at time $T$ minus price at the beginning of return period, $P_0$, divided by $P_0$) are much larger for the Japanese sample (4.358 and 3.062, respectively) than they are for the US sample (2.646 and 0.971, respectively) as reported in EHO.[24] This indicates that over the 10-year interval, Japanese stock prices rose more than their US

counterparts, ceteris paribus. Note further that the measure of dividend yield over the 10-year interval (AD, sum of dividends over the 10-year period, divided by $P_0$) is lower for the Japanese sample than it is for the US sample, reflecting the fact that the dividend payout ratio is lower in Japan than in the US (Frankel, 1991). With respect to earnings yield over the 10-year period (AX, sum of earnings per share over the 10-year period, divided by $P_0$), both the mean and the median of AX are much lower for the Japanese sample (0.717 and 0.598, respectively) than for the US sample (1.751 and 1.286). This is consistent with the notion that reported earnings are measured more conservatively in Japan than in the US. The above evidence, taken as a whole, is consistent with the observation that price–earnings ratios are higher for Japanese firms than for comparable US firms.

## The Performance of the EHO Model and Its Implications

Using a pooled sample of randomly selected 1211 firm/10-year interval observations, we estimate Equation 1 by applying the OLS procedure.[25] In so doing, we use net income after taxes to calculate the independent variable, $z_{Tj}$, and assume a flat term structure and a risk-free rate of 6%.[26] Panels A, B, C and D of Table 3 report the regression results for Eq. (1). using the 10-, 5-, 2- and 1-year return periods, respectively.

Comparison of our results in Table 3 with the US results of EHO (as reported in EHO's Tables 3 and 4) reveals that the $R^2$ of return–earnings regressions is much lower for Japan than for the US, regardless of the time interval used. For example, when the 10-year interval is used, the $R^2$ is 19% for our Japanese sample (as reported in our Table 3), while it is 63% for the US sample (as reported in EHO's Table 3). Thus, the results reported in Table 3 indicate that the ability of reported earnings to explain market returns is much lower in Japan than in the US, a finding consistent with Hall et al. (1994).

Similar to the US results of EHO, we also observe that the explanatory power of return–earnings regressions increases substantially for Japanese firms as the time interval for earnings aggregation lengthens. It is further observed that the $R^2$ difference between the Japanese and US results becomes larger as the time interval for earnings aggregation lengthens. For example, the inter-country difference in $R^2$ is 44% (= 63%−19%) which is the largest in magnitude when accounting earnings are aggregated over 10 years. Given that the effect of differences in accounting methods on the return–earnings association should diminish as the time interval lengthens, the $R^2$ difference observed between Japanese and US samples is not likely to be driven primarily by inter-country differences in accounting methods, but by the inter-country difference in the value relevance of reported earnings.

It is well known that accounting practices are much more conservative in Japan than in the US (Aron, 1989; Bildersee et al., 1990; Campbell, 1991; French and Poterba, 1991). Conservative accounting practices do not necessarily diminish the explanatory power of reported earnings for market returns so long as market participants are able to see through their valuation implications (Harris and Ohlson, 1987; Harris et al., 1994). However, conservative accounting practices would cause the ERCs to be higher than otherwise if the market correctly incorporates the downward bias in reported earnings into the valuation of equity shares (Feltham and Ohlson, 1995). This positive effect of accounting

**Table 3.** Regression Results of the EHO Model for Various Return Windows ($N = 1211$)

| *Subperiod* | $\alpha_T$ | | $\beta_T$ | | $R^2$ |
|---|---|---|---|---|---|
| Panel A: 10-year Return Period | | | | | |
| | 2.206 | (12.25) | 2.897 | (16.84) | 0.190 |
| Panel B: 5-year Return Period | | | | | |
| 2 (late) | 1.232 | (12.97) | 2.400 | (7.50) | 0.044 |
| 1 (early) | 1.096 | (14.05) | 1.631 | (9.26) | 0.066 |
| Panel C: 2-year Return Period | | | | | |
| 5 (latest) | 0.416 | (12.48) | 2.087 | (6.42) | 0.033 |
| 4 | 0.486 | (16.35) | 0.718 | (3.23) | 0.009 |
| 3 | 0.438 | (17.11) | 0.693 | (3.56) | 0.010 |
| 2 | 0.435 | (15.78) | 0.671 | (3.90) | 0.012 |
| 1 (earliest) | 0.474 | (18.79) | 0.413 | (4.08) | 0.014 |
| Panel D: 1-year Return Period | | | | | |
| 10 (latest) | 0.226 | (13.06) | 0.093 | (0.31) | 0.000 |
| 9 | 0.192 | (8.55) | 2.189 | (4.63) | 0.017 |
| 8 | 0.225 | (13.65) | 0.490 | (2.60) | 0.006 |
| 7 | 0.224 | (15.37) | 0.169 | (0.77) | 0.001 |
| 6 | 0.236 | (15.89) | 0.369 | (1.83) | 0.003 |
| 5 | 0.185 | (13.14) | 0.336 | (1.79) | 0.003 |
| 4 | 0.227 | (13.28) | 0.229 | (1.10) | 0.001 |
| 3 | 0.191 | (13.05) | 0.630 | (3.72) | 0.011 |
| 2 | 0.219 | (16.82) | 0.243 | (3.21) | 0.008 |
| 1 (earliest) | 0.214 | (16.32) | 0.451 | (4.30) | 0.015 |

*Note*: The association between market returns and accounting earnings is examined by estimating the following regression:

$$y_{Tj} = \alpha_T + \beta_T z_{Tj} + \varepsilon_{Tj}$$

$$y_{Tj} \equiv [P_{Tj} + d_{1j}(R_F^{T-1}) + d_{2j}(R_F^{T-2}) + \ldots + d_{T-1j}(R_F) + d_{Tj} - P_{0j}]/P_{0j}$$

$$z_{Tj} \equiv AX_{Tj} + [d_{1j}(R_F^{T-1} - 1) + d_{2j}(R_F^{T-2} - 1) + \ldots + d_{T-1j}(R_F - 1)]/P_{0j}$$

where $P_{tj}$ = price per common share of firm $j$ at date $T$, $AX_{Tj} = \sum_{t=1}^{T} x_{tj}$, $x_{tj}$ = earnings per share for firm $j$ for the $(t-1, t)$ period, $d_{tj}$ = dividends per share at date $t$, and $R_F = 1$ + risk-free rate = 1.06. Numbers in parentheses are $t$-statistics. Two 5-year samples are constructed by partitioning the 10-year sample into the early and late 5-year subperiods. Five 2-year samples are constructed in a similar way.

conservatism on the ERC would become more apparent when earnings are aggregated over the longer periods.

Comparison of the ERC ($\beta_T$) between our results (Table 3) and the US results of EHO (their Tables 3 and 4), in general, supports the above argument that accounting practices in Japan are more conservative than in the US. When earnings are aggregated over relatively long periods ($T = 5$ and $T = 10$), the ERC is greater for the Japanese sample than for the US sample. For example, when $T = 10$, the ERC is 2.897 for the Japanese sample while it is 1.659 for the US sample (as reported in EHO's Table 3). Finally, when earnings are

aggregated over short periods ($T = 1$ and $T = 2$), there is no clear difference in the ERC between the US and Japanese samples.

However, like other studies dealing with cross-country differences in return–earnings associations, comparison of our Japanese results with the US results of EHO is difficult to do on an equal basis. For example, our Japanese results are based on parent-only earnings, while the US results are based on *consolidated* earnings. However, for both US and Japanese firms, stock prices reflect business performance for the consolidated entities. One may thus argue that differences observed between the Japanese and US results are driven by the consolidation difference between the two countries, although previous research indicates that the parent-only earnings are more value-relevant for Japanese firms than consolidated earnings (Darrough and Harris, 1991). In short, reported cross-country differences in return–earnings associations should thus be interpreted with some caveats.[27]

## Tests for Effects of Institutional and Fundamental Characteristics

Hypotheses $H_1$ to $H_5$ focus on the extent to which the return–earnings association is differentially influenced by the five firm-specific variables that are related to institutional and fundamental characteristics in Japan. To test these five hypotheses, we first rank all firms in the sample on the basis of the following five variables.

1. *The level of cross-corporate ownership (CRH)*: the 10-year average ratio of the number of a firm's common shares held by financial institutions and other business corporations to the total number of the firm's common shares outstanding.
2. *The level of foreign ownership (FOR)*: the 10-year average ratio of the number of a firm's shares held by non-resident foreigners to the total numbers of the firm's shares outstanding.
3. *The level of a firm's real estate holding (REH)*: the 10-year average ratio of book values of a firm's real estate assets (land and buildings) to book values of total assets.
4. *The level of a firm's investment in equities of other firms (INV)*: the 10-year average ratio of book value of investment by a firm into other firms to book value of its net assets.
5. *Financial leverage (FLV)*: the 10-year average ratio of book value of debt to market value of equity.

We then partition the Full sample into two groups, the Above-median and Below-median groups, and re-estimate Equation 1 for each group by applying the OLS procedure.

Table 4 reports descriptive statistics for the 10-year average of each partitioning variable for the Full, Above-median and Below-median samples. As shown in Panel A of the table, 61.4%, 72.7% and 49.9% of common shares outstanding are, on average, cross-owned by corporate shareholders such as financial institutions and other business corporations for the Full, Above-median and Below-median samples, respectively. In contrast with the high mean value for the percentage of cross-held shares (CRH), its standard deviation is relatively low. It is 14.6%, 6.3% and 10.9% for the Full, Above-median and Below-median

**Table 4.** Descriptive Statistics of the Five Partitioning Variables for Each Partitioned Subsample Using the 10-year Window

| *Variable* | *Partition* | *N* | *1st Quartile* | *Median* | *3rd Quartile* | *Mean* | *Std. dev.* | *T-statistic* |
|---|---|---|---|---|---|---|---|---|
| Panel A: The Level of Cross Corporate Shareholdings (CRH) | | | | | | | | |
| CRH | Full | 1165 | 0.525 | 0.633 | 0.721 | 0.614 | 0.146 | |
| | Above | 583 | 0.675 | 0.721 | 0.773 | 0.729 | 0.063 | 43.93 |
| | Below | 582 | 0.438 | 0.524 | 0.586 | 0.499 | 0.109 | |
| Panel B: The Level of Foreign Ownership (FOR) | | | | | | | | |
| FOR | Full | 960 | 0.008 | 0.023 | 0.055 | 0.045 | 0.069 | |
| | Above | 480 | 0.036 | 0.055 | 0.091 | 0.081 | 0.083 | 18.82 |
| | Below | 480 | 0.003 | 0.008 | 0.014 | 0.009 | 0.007 | |
| Panel C: The Level of a Firm's Real Estate Holding (REH) | | | | | | | | |
| REH | Full | 1093 | 0.070 | 0.102 | 0.146 | 0.120 | 0.084 | |
| | Above | 546 | 0.119 | 0.146 | 0.185 | 0.175 | 0.086 | 28.42 |
| | Below | 547 | 0.047 | 0.070 | 0.086 | 0.065 | 0.026 | |
| Panel D: The Level of a Firm's Investment in Equities of Other Firms (INV) | | | | | | | | |
| INV | Full | 1152 | 0.121 | 0.204 | 0.360 | 0.287 | 0.341 | |
| | Above | 576 | 0.297 | 0.359 | 0.519 | 0.464 | 0.378 | 20.61 |
| | Below | 576 | 0.079 | 0.121 | 0.156 | 0.110 | 0.164 | |
| Panel E: Financial Leverage (FLV) | | | | | | | | |
| FLV | Full | 1211 | 0.602 | 1.123 | 2.251 | 1.754 | 1.948 | |
| | Above | 605 | 1.615 | 2.250 | 3.380 | 2.888 | 2.221 | 24.95 |
| | Below | 606 | 0.398 | 0.602 | 0.832 | 0.618 | 0.277 | |

*Note*: In each panel, the sample is partitioned into the two subsamples using the median value of each conditioning variable. CRH is the 10-year average ratio of the number of a firm's common shares held by financial institutions and other business corporations to the total number of the firm's common shares outstanding; FOR is the 10-year average ratio of the number of a firm's shares held by non-resident foreigners to the firm's total number of common shares outstanding; REH is the 10-year average ratio of book values of a firm's real estate assets (land and buildings) to book values of total assets; INV is the 10-year average ratio of book value of investment by a firm into other firms to book value of its net assets; and FLV is the 10-year average ratio of book value of debt to market value of equity. *T*-statistic is the test statistic for the difference in mean values between the two subsamples.

samples, respectively. In particular, the standard deviation of 6.3% for the Above-median sample is very low, considering the high mean value of 72.9% for the same sample. This result is consistent with the notion that cross corporate shareholders for Japanese firms are more likely to act as "stable owners" rather than "frequent traders" especially for high-CRH firms, and that they own common shares not for short-term capital gains but for long-term business relationships.[28]

As shown in Panel B of Table 4, on average, foreign investors own 4.5% of the total number of common shares outstanding for the Full sample, while they own 8.1% and 0.9% for the Above-median and Below-median samples, respectively. As mentioned earlier, however, a large portion of common shares outstanding for Japanese firms are cross-owned by stable corporate shareholders, and thus, are rarely traded (Jacobson and Aaker, 1993; Jiang and Kim, 1998). It should therefore be pointed out that the percentage of total *tradable* shares owned by foreign investors should be much higher than the percentage of total shares *outstanding* owned by foreign investors, namely the FOR value

reported in Panel B of the table.[29] Note that unlike the case for CRH, the standard deviation for the level of foreign ownership (FOR) is high relative to its mean value. It is 6.9%, 8.3% and 0.7% for the Full, Above-median and Below-median samples, respectively, suggesting that the level of foreign ownership fluctuates during the sample period. This evidence supports the argument that unlike cross-owned corporate shareholders, foreign investors in the Japanese equity markets are more likely to act as "frequent traders" rather than "stable owners."

Results in Panel C of Table 4 reveal that real estate assets held by Japanese firms account for 12%, 17.5% and 6.5% of total assets for the Full, Above-median and Below-median samples, respectively. As Panel D of the table indicates, on average, Japanese firms invest 28.7%, 46.4% and 16.4% of their net assets into equities of other firms for the Full, Above-median and Below-median samples, respectively. These high values of INV are not surprising given the prevalence of cross corporate ownership in Japan through investment in equity shares of other affiliated firms. Panel E of the table shows that the financial leverage, measured by the 10-year average ratio of book value of debt to market value of equity (FLV), reaches 1.754 for the Full sample, while it is 2.888, and 0.618 for the Above-median and Below-median samples, respectively.

Table 5 reports the regression results for the Full, Above-median and Below-median samples. Note that in Table 5, the number of firm/10-year observations varies from 960 (Panel B) to 1211 (Panel E) because the number of missing value over the 10-year period differs across the five partitioning variables described above.

When the sample is partitioned into two groups on the basis of the cross holding variable (Panel A), the return–earnings association is stronger for the Below-median group than for the Above-median group. The $R^2$ for the Below (Above)-median group is 24.1% (12.3%). Both the magnitude and the significance of the ERC are greater for the Below-median group than for the Above-median group. In addition, the result of the Chow test indicates that there exists a significant structural difference in the return–earnings association between the two groups. The above results, taken as a whole, support our first hypothesis (H1) that reported earnings are less value-relevant for Japanese firms whose shares are more extensively cross-held.

Panel B of Table 5 reports regression results when the sample is partitioned into two groups on the basis of the foreign ownership variable (FOR). Consistent with our second hypothesis (H2), both the return–earnings association is markedly stronger for the Above-median group than for the Below-median group. The $R^2$ for the Above (Below)-median group is 32.2% (7.9%). The magnitude of the ERC is much greater for the Above-median group (3.943) than for the Below-median group (1.764). The above results suggest that foreign investors tend to prefer investments in equity shares of firms with the high-quality accounting reports to those with the low-quality accounting reports.

Panel C of Table 5 reports the regression results when the sample is partitioned into two groups on the basis of the real estate holding variable (REH). Consistent with our third hypothesis (H3), the return–earnings association is weaker (stronger) for firms whose real estate holding is relatively large (small). Both the $R^2$ and the ERC are larger for the Below-median group than they are for the Above-median group. The result of the Chow test also indicates that the return–earnings association differs significantly in its structure between the two groups. The above evidence is consistent with the notion that

**Table 5.** Effect of Institutional Characteristics on Return–Earnings Associations over the 10-year Window

| | $\alpha_T$ | | $\beta_T$ | | $R^2$ | $N$ |
|---|---|---|---|---|---|---|
| Panel A: The Level of Cross Corporate Ownership (CRH) | | | | | | |
| Full | 2.168 | (11.72) | 2.915 | (16.84) | 0.189 | 1165 |
| Above median | 2.530 | (9.85) | 2.457 | (9.02) | 0.123 | 583 |
| Below median | 1.893 | (7.03) | 3.203 | (13.57) | 0.241 | 582 |
| Chow test of structural difference | | | $F$-statistic = 2.14 | | $df$ = (2,1161) | |
| Panel B: The Level of Foreign Ownership (FOR) | | | | | | |
| Full | 1.798 | (9.37) | 3.100 | (16.50) | 0.221 | 960 |
| Above median | 1.058 | (3.47) | 3.943 | (15.07) | 0.322 | 480 |
| Below median | 2.599 | (11.04) | 1.764 | (6.40) | 0.079 | 480 |
| Chow test of structural difference | | | $F$-statistic = 15.79 | | $df$ = (2,956) | |
| Panel C: The Level of a Firm's Real Estate Holding (REH) | | | | | | |
| Full | 1.747 | (9.28) | 3.411 | (18.49) | 0.239 | 1093 |
| Above median | 1.805 | (6.91) | 2.980 | (11.57) | 0.197 | 546 |
| Below median | 1.789 | (6.63) | 3.759 | (14.31) | 0.273 | 547 |
| Chow test of structural difference | | | $F$-statistic = 4.77 | | $df$ = (2,1089) | |
| Panel D: The Level of a Firm's Investment in Equities of Other Firms (INV) | | | | | | |
| Full | 2.086 | (11.23) | 3.033 | (16.80) | 0.197 | 1152 |
| Above median | 2.761 | (12.95) | 2.213 | (9.69) | 0.141 | 576 |
| Below median | 1.156 | (3.68) | 3.917 | (13.89) | 0.252 | 576 |
| Chow test of structural difference | | | $F$-statistic = 11.82 | | $df$ = (2,1148) | |
| Panel E: Financial Leverage (FLV) | | | | | | |
| Full | 2.206 | (12.25) | 2.897 | (16.84) | 0.190 | 1211 |
| Above median | 3.047 | (14.87) | 1.852 | (8.93) | 0.117 | 605 |
| Below median | 1.117 | (3.73) | 4.024 | (14.83) | 0.267 | 606 |
| Chow test of structural difference | | | $F$-statistic = 20.96 | | $df$ = (2,1207) | |

*Note*: The association between market returns and accounting earnings is examined by estimating the following regression using observations over the 10-year window:

$$y_{Tj} = \alpha_T + \beta_T z_{Tj} + \varepsilon_{Tj}$$

$$y_{Tj} \equiv [P_{Tj} + d_{1j}(R_{\mathrm{F}}^{T-1}) + d_{2j}(R_{\mathrm{F}}^{T-2}) + \ldots + d_{T-1j}(R_{\mathrm{F}}) + d_{Tj} - P_{0j}]/P_{0j}$$

$$z_{Tj} \equiv AX_{Tj} + [d_{1j}(R_{\mathrm{F}}^{T-1} - 1) + d_{2j}(R_{\mathrm{F}}^{T-2} - 1) + \ldots + d_{T-1j}(R_{\mathrm{F}} - 1)]/P_{0j}$$

where $P_{Tj}$ = price per common share of firm $j$ at date $T$, $AX_{Tj} = \sum_{t=1}^{T} x_{tj}$, $x_{tj}$ = earnings per share for firm $j$ for the $(t-1, t)$ period, $d_{tj}$ = dividends per share at date $t$, and $R_{\mathrm{F}}$ = 1 + risk-free rate = 1.06. Numbers in parentheses are $t$-statistics.

the large discrepancy between market and book values of real estate assets observed over the sample period inevitably adds biases into reported earnings, which in turn distorts the return–earnings association.[30]

When the sample is partitioned into two groups on the basis of the amount of a firm's investment into equities of other firms (INV), the return–earnings association is much stronger for the Above-median group than for the Below-median group, which is

consistent with our fourth hypothesis (H4). The $R^2$ is 25.2% (14.1%), and the ERC is 3.917 (2.213), for the Above (Below)-median group. While it is highly significant for both groups, the ERC is more significant for the Above-median group than for the Below-median group. The above results, taken together, indicate that the strength of the return–earnings association is adversely affected by the bias arising from the discrepancy between market and book values of investment securities.

The results reported in Panel E of Table 5 strongly support our fourth hypothesis (H4) on the effect of financial leverage on the return–earnings association. When the sample is partitioned into two groups on the basis of the financial leverage variable (FLV), the $R^2$ for the Below-median group, which is 26.7%, is more than twice as large as that for the Above-median group, which is 11.7%. This indicates that the ability of reported earnings to explain cross-sectional variations in market returns is much higher (lower) for such firms that rely less (more) on debt financing relative to equity financing. Further, both the magnitude and the significance of the ERC are much larger for the Below-median group than for the Above-median group, a finding consistent with Collins and Kothari (1989) and Easton and Zmijewski (1989). The result of the Chow test also indicates that the return–earnings association significantly differs in its structure between the two groups. In short, the results in Panel E of Table 5 suggest that the strength of the return–earnings association is *inversely* affected by the degree of a firm's reliance on debt financing. However, to the extent that security beta is related to financial leverage, our Japanese results are not consistent with the US results of EHO who find that beta has little effect on the return–earnings association and the ERC.

## SENSITIVITY ANALYSIS

To check for the extent to which our regression results reported in Table 5 are sensitive to the length of window over which earnings are aggregated, we re-estimate the return–earnings regressions using the 5-year window. To do so, we construct two 5-year samples by partitioning the 10-year sample into the "early" and "late" 5-year subperiods. Table 6 reports the results of regressions using observations in the early 5-year subperiod.[31] As expected, the $R^2$ using the 5-year window is substantially less than the $R^2$ using the 10-year window for all cases (the Full, Above-median and Below-median groups), regardless of the partitioning variables used. Comparison of regression results reported in Tables 5 and 6 clearly reveals that the ERCs from return–earnings regressions using the 5-year window are, in general, smaller in magnitude, though still significant. The difference in the magnitude of ERCs between the Above-median and Below-median groups is consistent with the hypothesized predictions for all partitions except when the level of a firm's investment in equities of other firms (INV) is used as the partitioning variable. As reported in Panel D of Table 6, the ERC is slightly greater in magnitude for the Above-median INV group than for the Below-median INV group, a finding *inconsistent* with our fourth hypothesis, H4 (and the results reported in Panel D of Table 5). The results of Chow test show, however, that the return–earnings relation does not differ significantly in its structure between the two groups. The above results, along with the results reported in Panel D of Table 5, suggest that the 5-year interval may not be long enough to effectively capture the differential effect on ERCs of the amount of unrecognized goodwill arising from the

**Table 6.** Effect of Institutional Characteristics on Return–Earnings Associations over the 5-Year Window

| | $\alpha_T$ | | $\beta_T$ | | $R^2$ | $N$ |
|---|---|---|---|---|---|---|
| Panel A: The Level of Cross Corporate Ownership (CRH) | | | | | | |
| Full | 1.107 | (14.01) | 1.628 | (8.41) | 0.066 | 1193 |
| Above median | 1.473 | (13.03) | 1.288 | (2.42) | 0.041 | 596 |
| Below median | 0.667 | (6.28) | 2.133 | (3.66) | 0.116 | 597 |
| Chow test of structural difference | | | $F$-statistic = 13.72 | | $df$ = (2,1189) | |
| Panel B: The Level of Foreign Ownership (FOR) | | | | | | |
| Full | 1.136 | (12.66) | 1.764 | (8.70) | 0.071 | 995 |
| Above median | 1.086 | (7.69) | 2.761 | (8.72) | 0.133 | 497 |
| Below median | 1.063 | (9.32) | 0.917 | (3.52) | 0.024 | 498 |
| Chow test of structural difference | | | $F$-statistic = 19.72 | | $df$ = (2,991) | |
| Panel C: The Level of a Firm's Real Estate Holding (REH) | | | | | | |
| Full | 0.937 | (11.08) | 2.072 | (9.88) | 0.079 | 1144 |
| Above median | 0.916 | (7.20) | 1.987 | (6.17) | 0.063 | 572 |
| Below median | 0.963 | (8.38) | 2.145 | (7.65) | 0.093 | 572 |
| Chow test of structural difference | | | $F$-statistic = 0.36 | | $df$ = (2,1140) | |
| Panel D: The Level of a Firm's Investment in Equities of Other Firms (INV) | | | | | | |
| Full | 0.961 | (11.49) | 2.044 | (9.93) | 0.077 | 1180 |
| Above median | 0.983 | (8.21) | 2.246 | (7.00) | 0.077 | 590 |
| Below median | 0.930 | (8.01) | 1.922 | (7.22) | 0.081 | 590 |
| Chow test of structural difference | | | $F$-statistic = 1.07 | | $df$ = (2,1176) | |
| Panel E: Financial Leverage (FLV) | | | | | | |
| Full | 1.096 | (14.05) | 1.631 | (9.26) | 0.066 | 1211 |
| Above median | 0.892 | (9.77) | 1.183 | (5.95) | 0.056 | 605 |
| Below median | 1.224 | (8.94) | 2.208 | (6.87) | 0.072 | 606 |
| Chow test of structural difference | | | $F$-statistic = 19.57 | | $df$ = (2,1207) | |

*Note*: Two 5-year samples are constructed by partitioning the 10-year sample into the early and late 5-year subperiods. Five 2-year samples are constructed in a similar way. Reported are the results of the following regression using observations over the early 5-year window for each partitioned sample:

$$y_{Tj} = \alpha_T + \beta_T z_{Tj} + \varepsilon_{Tj}$$

$$y_{Tj} \equiv [P_{Tj} + d_{1j}(R_F^{T-1}) + d_{2j}(R_F^{T-2}) + \ldots + d_{T-1j}(R_F) + d_{Tj} - P_{0j}]/P_{0j}$$

$$z_{Tj} \equiv AX_{Tj} + [d_{1j}(R_F^{T-1} - 1) + d_{2j}(R_F^{T-2} - 1) + \ldots + d_{T-1j}(R_F - 1)]/P_{0j}$$

where $P_{tj}$ = price per common share of firm $j$ at date $T$, $AX_{Tj} = \sum_{t=1}^{T} x_{tj}$, $x_{tj}$ = earnings per share for firm $j$ for the $(t-1, t)$ period, $d_{tj}$ = dividends per share at date $t$, and $R_F$ = 1 + risk-free rate = 1.06. Numbers in parentheses are $t$-statistics.

deviation of the market value of investment securities from their associated book value. In short, our regression results reported in Table 5 are robust to different time intervals (10 years vs. 5 years) over which earnings are aggregated except for the case in which INV is used as the partitioning variable.

In Japan, prices of real estates skyrocketed throughout the late 1970s and 1980s, and peaked in 1990, and then, began to decline in 1991. Further, it is well documented that prices of equity shares in Japan move in tandem with prices of real estate assets (Frankel,

1991). In an attempt to examine the sensitivity of our results to the changes in the direction of price movements for both real estates and equities, we re-estimate the EHO model using the data up to and including 1990. Though not presented in the table format for space economy, we can report that our new results of regressions using this reduced sample up to 1990 remain virtually identical with the regression results reported in Panel C of Table 5.[32] The results above suggest that empirical evidence reported in Table 5 is robust to the reversal of the direction of asset price movements in Japan that began to occur in 1991.

With respect to the results reported in Table 5, it should be pointed out that we partition the full sample into the two groups on the basis of the *10-year average* of each partitioning variable. Suppose, however, that the partitioning variable itself (e.g., the level of foreign ownership) has changed substantially over the 10-year interval. In such a case, our results may not effectively capture differential impacts of each partitioning variable on return–earnings associations because our approach presumes that the value of each partitioning variable remains stable over the 10-year averaging period. To check whether the results reported in Table 5 are sensitive to possible fluctuations in each partitioning variable, we compute the variance of each partitioning variable over the 10-year averaging period for each firm, and then, construct a reduced sample by eliminating the 10% of observations with the largest variance.[33] Though not presented in the table format, we can report that our new results using this reduced sample remain statistically identical with those reported in Table 5.

In an attempt to check whether our regression results are sensitive to the presence of extreme observations which may potentially lead to the violation of the normality assumption on regression residuals, we re-estimate all the regressions after eliminating the top 1% and the bottom 1% of distributions for both the dependent and independent variables. While this procedure, in general, reduces the coefficients of skewness and kurtosis, our statistical inferences, overall, remain unchanged, suggesting that our reported results are not driven by outliers.

To check for the sensitivity of our regression results to potential problems of heteroskedasticity (and autocorrelation), we also re-estimate all the regressions used in this paper, using the White (1980) procedure (and the Newey and West [1987] procedure as well).[34] While the application of both procedures reduces $t$ for regression coefficients in some cases, it rarely changes the level of significance or statistical inferences for all cases.[35] This suggests that the use of the same deflator (i.e., stock prices at the beginning of 10-year intervals) for both the dependent and independent variables, as shown in Equation 1 (and our random selection procedure in which each firm contributes only one observation to the 10-year RANDOM sample, as explained in the sample and data sources section) appears to effectively alleviate potential problems, if any, of heteroskedasticity (and autocorrelation). In this paper, we have reported only the regression results using the OLS procedure to make our results comparable with the results of EHO and Hall et al. (1994) who report the OLS results.

## SUMMARY AND CONCLUDING REMARKS

In this paper, we investigate the association between market returns and accountings earnings for a sample of Japanese firms, using the long-window approach developed

by EHO. In particular, our analyses focus on the extent to which the return–earnings association in Japan is differentially affected by several institutional characteristics that are deemed to be important in Japan. Results of various tests indicate that the strength of return–earnings associations, measured by the $R^2$ and the magnitude and significance of ERC, are inversely affected by the level of cross corporate ownership, the degree of a firm's real estate holding, the level of a firm's investment in equities of other firms, and financial leverage, while it is positively affected by the level of foreign ownership.

Our results also suggest that reported earnings numbers are less value-relevant in Japan than in the US, and that the pervasive use of conservative accounting practices in Japan is well manifested in the return–earnings association. In other words, while the explanatory power of earnings for market returns is, in general, lower for Japanese firms than for US firms, the ERC is greater for Japanese firms than for US firms especially when earnings are aggregated over relatively long periods.

Collectively, our results suggest that future research on cross-country differences in the value relevance of accounting disclosures must pay more attention to institutional environments unique to countries concerned. Further research in this direction is called for.

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## NOTES

1. See Bernard (1989) and Lev (1989) for a summary of this evidence from the earlier literature.
2. EHO's results show that the $R^2$ of return–earnings regression increases by the magnitude of 6% times the number of years in the return interval.
3. The total stock market capitalization in Japan and US has been about 70% of the world market capitalization. In 1989, total market capitalization relative to the world market capitalization was 44% for Japan and 29% for US (Frankel, 1991).
4. If a firm's earnings, change is predicted to be permanent and earnings are measured in an unbiased way, the theoretical value of ERC is predicted to be about $1 + 1/r$ where $r$ is the expected rate of return on a firm's equity (Komandi and Lipe, 1987; Collins and Kothari, 1989; and Kothari and Sloan, 1992). Previous research using the short-window approach, however, reports the ERCs being much smaller than their theoretical values.
5. When the reverse regression approach is used, measurement errors in earnings becomes measurement errors in the dependent variable, which inflates residual variances, or equivalently reduces the $R^2$. Collins and Kothari (1989), for example, report that the $R^2$ for *multiple* regressions of returns in period $t$ and period $t - 1$ on changes in earnings for period $t$ (deflated by the beginning price) ranges from 3.56% to 5.72%. (See their Table 3.)

6. For a more detailed discussion about the lead-lag issue, see EHO, Kothari and Sloan (1992), Dechow (1994) and Hall et al. (1994).
7. This should be an important consideration for studying the Japanese market because unlike US samples, earnings announcement dates are very difficult to identify for Japanese samples. We are unaware of any machine-readable database that contains earnings announcement dates for Japanese firms.
8. In Japan, there are at least 17 *major* industrial groups or keiretsus. The six largest keiretsus, Mitsubishi, Mitsui, Sumitomo, Fuji, Dai-Ichi Kangkyo and Sanwa, have a major main bank that plays the central role in financial activities of firms within each keiretsu, and controls about half of the top 200 firms in Japan through cross-ownership, which amounts to more than 25% of all the assets in Japan. In 1987, keiretsu firms accounted for 6% of total employment in Japan, 16.8% of annual corporate sales and 12.7% of corporate profits (Dodwell Marketing Consultants, 1989).
9. Jacobson and Aaker (1993) provide evidence consistent with this argument.
10. For example, the Mitsui Group, which is one of the big six horizontal keiretsus, has an executive council called the Nimoku-kai (second Thursday club) which consists of 26 core affiliated (cross-held) companies. It meets on the second Thursday of each month to exchange much information. The Mitsubishi Group has a similar meeting called the Kin-yokai (Friday meeting) for similar purposes. We thank Professor Kazuyuki Suda at Kansai University, Osaka, Japan who brought this issue to our attention.
11. While we have witnessed a decrease in barriers to cross-boarder portfolio investment during the last two decades, the literature on the home bias in portfolios shows that foreign ownership of equity shares is not prevalent, and most equity shares are still held by domestic residents in most countries, including the US and Japan (Cooper and Kaplanis, 1994; Tesar and Werner, 1995; Kang and Stulz, 1997). It should be noted that the above studies, with exception of Kang and Stulz, rely on country-wide data rather than firm-specific data on foreign ownership.
12. In most countries, foreigners are not allowed to buy some types of shares. In China, for example, foreign investors can buy and sell only B-shares, not A-shares. In Korea, it was not until recently that foreigners are allowed to buy equity stocks beyond the certain percentage of total shares outstanding so that hostile takeovers by foreigners are prohibited. For a more detailed discussion, see Stulz and Wasserfallen (1995).
13. Cready (1988), Lee (1992) and Kim et al. (1997), among others, show that large non-individual shareholders may have informational advantage over small individual investors in assimilating value-relevant information.
14. We thank an anonymous referee who brought this point to our attention.
15. Japanese accounting rules for asset valuation have relied unequivocally on the historical cost measurements. In Japan, firms have traditionally been prohibited from disclosing current cost information about non-current assets even as supplemental information (Choi and Mueller 1992), while the Japan's Securities and Exchange law has required listed companies to disclose market prices of investments in securities and future/options contracts as supplemental information since 1990.
16. The bias in reported earnings is generated when an accounting method fails to fully capture a market value shock in the earnings of the period when the shock occurs. See Beaver and Ryan (1995) and Ryan (1995) for in-depth discussions on the issue.
17. Consider a firm whose life matches the earnings aggregation period. In such a case, the noise due to the timing difference in the recognition of value-relevant events would not exist for *aggregate* earnings over the lifetime, though it could be nontrivial for *periodic* earnings for a subperiod (say a year) within the lifetime (say 10 years).
18. Previous research report that in Japan, only a small fraction of shares outstanding (less than 30%) are available for ordinary trading by individual investors (e.g., Kang and Shivdasani 1995).

19. Under certain assumptions, price can be expressed as (permanent) earnings divided by the difference between the discount rate and growth. In this framework, price–earnings relations can be inversely related to the discount rate or the required rate of return that can be proxied by the risk variable such as systematic risk or debt-to-equity ratios.
20. However, EHO do not provide numerical evidence on this issue.
21. Collins and Kothari (1989, p. 147) conclude that "the ERC is a decreasing function of a security's systematic risk. In valuation terms, the higher the systematic risk the smaller the present value of a given increase in expected future dividends caused by unexpected earnings."
22. In addition to model (1) (their M1 model), EHO consider two alternative regression models (i.e., their M2 and M3 models). EHO report that their empirical results remain virtually the same across the three models. We have also estimated all three models, and have also found that our results are robust to alternative model specifications. For brevity, we report only the results based on EHO's M1 model.
23. In addition, we have also implemented alternative schemes where each firm in the FULL sample contributes its earliest or latest 10-year periods. Similar to EHO, however, we have also encountered a problem of time clustering (i.e., uneven distribution of observations over different 10-year intervals).
24. This is reported in EHO's Table 2.
25. As explained in more details in the sensitivity analysis section, we have also estimated Equation 1 by applying alternative procedures such as the White (1980) and Newey and West (1987) ones. However, we report only the OLS results because the OLS results remain statistically identical with those obtained by applying the alternative procedures and the use of the OLS procedure makes it easy to compare our results with the US results of EHO who use the same procedure.
26. In addition, we estimate Equation 1 using earnings from operation as accounting earnings, but the results remain virtually identical except that the use of earnings from operation gives rise to a slightly higher $R^2$ for the 10-year return period. We also estimate Equation 1 using alternative risk-free rates of 10%, 8% and 4%. However, the results remain virtually the same across the different rates.
27. We thank an anonymous reviewer who brought this point to our attention.
28. Darrough et al. (1998) argue that the stable shareholding or infrequent trading by cross-held corporate shareholders serves as an anti-takeover device in the Japanese equity market.
29. As an example, suppose that 70% of total common shares outstanding are cross-held by corporate shareholders, and thus are not traded. Then only 30% of total common shares would be tradable. In such a case, the FOR value of 6% can be interpreted in such a way that 20% [= 6%/(1−70%)] of total *tradable* shares are owned by foreign investors.
30. Real estates prices in Japan peaked in 1990, and then began to decline in 1991(Frankel, 1991). Although not reported in here, in an attempt to examine the effect of this change in the direction of price movements, we re-estimate the EHO model using the data up to and including 1990. The regression results reported in Panel C of Table 4 remain virtually identical with our new results. The new results show, for example, that the $R^2$ for the Above (Below)-median group turns out to be 28.7% (2.05%). The ERC for the Above (Below)-median group is 3.741 (3.086) with the ERCs being highly significant for both groups.
31. The regression results using the late 5-year subperiod are not presented because they are similar to those reported in Table 6.
32. The new results show, for example, that when the sample is partitioned on the basis of the level of a firm's real estate holding (REH), the $R^2$ for the Above (Below)-median group turns out to be 28.7% (2.05%). The ERC for the Above (Below)-median group is 3.741 (3.086) with the ERCs being highly significant for both groups.
33. We thank an anonymous reviewer who brought this point to our attention.

34. A statistical software, SHAZAM, was used to apply the White (1980) and Newey and West (1987) procedures.
35. Note that both procedures do not change the magnitude of regression coefficients obtained by applying the OLS procedure, because the OLS estimate is still the best linear unbiased estimator.

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# International Trade and Accounting Policy Choice: Theory and Canadian Evidence

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**Key Words:** International trade; Exporter; Importer; Accounting policies; Depreciation; Canada

***Abstract:*** *The accounting policy choice literature has identified many factors which have been shown to be useful in explaining cross-sectional variation in the accounting methods used by public companies. One relationship which has been relatively unexplored in this literature is the potential effect of international trade on accounting choice. This study proposes that international trading activities may create incentives for firms to choose income increasing accounting policies. This proposition was tested by examining the depreciation choices of a sample of Canadian firms. Results suggest that importers were more likely to choose income increasing accounting methods than non-importers, while exporting was not found to be related to this accounting choice. These diverging results may be caused by the declining value of the Canadian dollar (relative to the US dollar), which tends to benefit exporters, but is of detriment to importers.*

The choice of accounting policies for financial reporting purposes has been the subject of research at least since Watts and Zimmerman (1978). The policy choice literature has also been extended to non-US settings (e.g., Sutton, 1988; Cullinan, 1994; Inuoe and Thomas, 1996). These studies have generally been predicated on managerial incentives to choose accounting policies based on relationships among a corporation's stakeholders, including managers, stockholders and creditors. One group of stakeholders who have not been considered in the accounting policy choice literature is foreign customers and suppliers. These stakeholders may assess the viability of trading partners based on the trading partner's perceived financial strength. As a result, firms engaging in international trading activities might wish to enhance their perceived financial strength through the choice of income maximizing accounting policies.

The purpose of this study is to empirically test the proposition that firms who engage in international trading activity may choose accounting policies that present their financial condition in a more favorable light. The context used to examine this issue is the depreciation policy choice of Canadian public companies. This context

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was considered appropriate because of the materiality of the depreciation policy choice and because of the importance of international trade to the Canadian economy.

The remainder of this paper is structured as follows. First, the relevant theoretical background is examined, and hypotheses are developed. The hypotheses are followed by a presentation of the research methods used in the study, and the results of empirical testing. The paper closes with a discussion of the results and conclusions.

## THEORETICAL BACKGROUND

### Background Literature

Management's selection of accounting policies has been examined extensively in the United States (see Watts and Zimmerman, 1990 for a review through 1990). Research has found that accounting choices are associated with size, measures of leverage and with the presence or absence of bonus plans (e.g., Zmijewski and Hagerman, 1981; Skinner, 1993). These variables were selected by previous researchers to proxy for various aspects of contractual relationships among stockholders, creditors, and managers in an agency theory framework.

Unlike the agency theory contractual relationships, the effects of international trade on accounting choices have not been extensively studied.[1] One of the few studies to examine the issue was Rotenberg (1989). She examined Canadian firms' choice of method to report gains and losses in the value of certain types of debt. She suggested that firms in the resource industries (e.g., mining, oil drilling) may choose to defer these gain and losses. Rotenberg hypothesized that since many resources are priced in US dollars, the revenue and profit streams of these resource firms may be materially affected by currency exchange rate fluctuations. As such, resource firms were expected to prefer deferral of gains and losses to smooth the fluctuations caused by participating in world resource markets. Rotenberg's (1989) results do not provide support for this hypothesis. Note that the resource firm test was not a main objective of Rotenberg's study, and no attempt was made to directly measure whether the resource firms engaged in foreign currency-based transactions.

### Theory/Hypothesis Development

#### *Exporters*

Bowen et al. (1995) presented the notion that accounting method choices may be influenced by implicit claims of stakeholders other than stockholders, creditors, and managers. Bowen et al. focused on the implicit claims which parties such as customers, suppliers, and others may have on the firm. They suggested that an organization's customers have implicit claims on the corporation for "specified quantity of performance, continuing supply of product or service, [and] continuing availability of parts and service" (Bowen et al., 1995, p. 259).

When a corporation's customers are in a foreign country (i.e., the corporation is an exporter), there may be two effects which create incentives regarding accounting policy

choice. First, when financial statements are denominated in a foreign currency, and are prepared under different GAAP, the foreign customers may have greater difficulty assessing the company's financial strength, and its continued suitability as a trading partner. Second, the risk of a foreign corporation being unable to provide goods and services to its customers at reasonable prices may be higher due to the potential fluctuations in exchange rates. For both of these reasons, a corporation engaging in export activities could be perceived by its international customers as a higher risk provider, increasing the incentives for an exporting firm to ensure that its financial statements demonstrate financial strength. An organization that sells across international borders would therefore have an incentive to choose accounting policies which tend to increase net income and net assets, enhancing the firm's perceived financial strength. This is the first hypothesis of the current study and is stated as follows (in the alternate form):

> **$H_1$:** Companies selling their goods and/or services in foreign markets (i.e., exporters) are more likely to choose income increasing accounting policies than those companies that are not exporters.

### *Importers*

Bowen et al. (1995) also examined implicit claims that a company's suppliers may have on the organization. The supplier's implicit claims center on "timely payment, continuing demand for product or service, [and] specified image for product or service" (Bowen et al., 1995, p. 259). Importing firms have *foreign* suppliers. These foreign suppliers may have difficulty in assessing financial strength of their international trading partners due to the effects of translating foreign financial statements. Fluctuating exchange rates can also make a corporation appear to be of greater risk to its foreign suppliers than a similar firm in the supplier's own country. A company would wish to reassure its foreign suppliers that the company has the ability to continue to meet the foreign supplier's implicit claims for continued demand, etc., even in the face of fluctuating exchange rates, which could make the suppliers' goods more expensive to the importer. A company engaging in foreign purchasing (i.e., an importer) could provide assurance to its foreign suppliers by exhibiting financial strength on its financial statements through the choice of income increasing accounting policies. This leads to the second hypothesis to be tested in this study (stated in the alternate form):

> **$H_2$:** Companies purchasing goods and/or services from foreign suppliers (i.e., importers) are more likely to choose income increasing accounting policies than those companies that are not importers.

## Control Variables

To test for the effects of exporter and importer status on the choice of accounting policies, factors that have been shown to influence these choices in previous studies need to be included. Christie and Zimmerman (1994) examined depreciation policy choices

among US firms over multiple years. Their findings, which control for industry classification, suggest that the variables most consistently associated with depreciation policy choice are firm size and leverage. Based on Christie and Zimmerman (1994) and other studies, size, leverage and an industry indicator variable are included as control variables in the current study.

Size is generally hypothesized to proxy for potential political costs in policy choice studies (e.g., Zmijewski and Hagerman, 1981). The rationale is that larger, more visible, firms are more likely to face increased government scrutiny of their activities and/or higher taxes. As such, larger firms may endeavor to hide their size by choosing accounting policies which tend to minimize reported income and assets in an attempt to be less politically visible, and reduce their political costs. Size is measured by log of total assets in the current study.[2]

As used in accounting policy choice studies, leverage is considered to be a measure of the importance of debt covenants in influencing accounting policies. The premise is that firms which are closer to violating their debt covenants are more likely to choose income increasing accounting policies to lessen the probability of being in violation of financial statement-based covenants. Duke and Hunt (1990) provide evidence that leverage is a reasonable proxy for the tightness of debt covenant restraints. Leverage in the current study is measured by the debt/assets ratio.

Many policy choice studies have used industry indicator variables in accounting policy choice studies (e.g., Thornton, 1986). This research has generally found that industry can exert an influence on a firm's accounting policy decisions. Cullinan and Knoblett (1994) found differing patterns of accounting choice between manufacturing firms and non-manufacturing firms. As such, a third control variable used in the current study is a dichotomous variable indicating whether the firm is in a manufacturing industry (i.e., SIC codes 20 to 39). Note that all three of these control variables are included to control for factors which have been found to be associated with depreciation policy choice in previous research, and not to test any particular hypothesis.

## RESEARCH METHODS

### Selection of Context and Rationale

This study examines the effects of international trade on the choice of depreciation method by Canadian firms. This study examines Canadian firms because of the importance of international trade to the Canadian economy. For example, exports and imports represented 38.4% and 35.3%, respectively, of Canadian Gross Domestic Product in 1996 (International Monetary Fund [IMF], 1997). The comparable figures for the US were 11.3% for exports and 12.6% for imports. The importance of international trade to Canadian firms suggests that incentives based on international trade may be more important in Canada than in the US. As such, Canada was determined to be an appropriate context in which to investigate the potential effects of international trade on accounting choices.

Depreciation was considered an appropriate choice for this study for two main reasons: materiality and variability. Christie and Zimmerman (1994) report that of

**Table 1.** Depreciation Policy by Exporter Status

| | Exporter status | | |
|---|---|---|---|
| *Depreciation method* | *Non-exporter* | *Exporter* | *Total* |
| Accelerated/Combination | 70 | 86 | 156 |
| Straight-line | 57 | 78 | 135 |
| Total | 127 | 164 | 291 |

*Note*: $\chi^2 = 0.207$ probability $> \chi^2 = 0.649$.

the three accounting methods they examined (depreciation, inventory, and investment tax credit (ITC) accounting) depreciation was the most material, with an average difference resulting from the depreciation choice of 26% of retained earnings. The other choices had substantially smaller impacts on the financial statements (an average of 9% and 5% for inventory and ITC, respectively). Thus, the depreciation policy choice is likely to be the most material policy choice, and therefore most apt to be chosen on the basis of strategic considerations, such as international trading incentives.

The second reason for choosing to examine depreciation choice relates to the relative lack of variability among Canadian firms in the inventory accounting method. Very few Canadian firms utilize the LIFO method for even a portion of their inventory (CICA, 1993),[3] most likely because the tax incentives associated with LIFO use in the US do not exist in Canada. Given the lack of LIFO use, the choice of inventory method in Canada is usually limited to FIFO or average cost (Arcelus and Trenholm, 1991), which would tend to produce a less material difference in financial statements than a choice between FIFO and LIFO. Because of the greater materiality and variability of methods employed, depreciation method choice was considered an appropriate accounting choice to study in the Canadian context.

## Data Gathering and Coding

The CD Canada database was used to gather the data used in the current study. The main variables of interest in this study were firms' depreciation policy choices and the firms' participation in export and/or import activity. Based on the disclosure available from CD Canada, the depreciation choice variable was coded 1 if the firm used primarily the straight-line method, and 0 if the firm used a combination of straight line and accelerated methods. (Only two firms in the sample utilized accelerated methods only, and the depreciation variable for these firms was classified as a 0.)[4] In this coding scheme, a 1 indicates a reporting method that tends to increase income and assets, while a 0 indicates a comparatively income and asset decreasing method.

The CD database contains fields for two variables to measure the importance of international trade to the firm: (1) whether the firm engages in exporting, and (2) whether the firm engages in importing. From these data, two variables were created. The exporter variable is coded 1 if the firm engages in export activities, and 0 if the firm does not export. Similarly, the importer variable is coded 1 if the firm engages in importing, 0 if the firm is not an importer.[5]

**Table 2.** Depreciation Policy by Importer Status

| | *Importer status* | | |
|---|---|---|---|
| *Depreciation method* | *Non-importer* | *Importer* | *Total* |
| Accelerated/Combination | 116 | 40 | 156 |
| Straight line | 83 | 52 | 135 |
| Total | 199 | 92 | 291 |

*Note*: $\chi^2 = 5.551$ probability > $\chi^2 = 0.018$.

The control variables were also obtained from CD Canada. The mean (standard deviation) of total assets of the firms in the sample is Can$1,890,311,000 ($461,158,000), while the mean leverage is 0.274 (0.2014). Manufacturing firms represent 33.3% of the sample. The manufacturing indicator variable was coded 1 if the firm was a manufacturer, and 0 if the firm was not a manufacturer. Excluding firms for which one or more of the variables were unavailable, the sample used in this study includes 291 Canadian firms, using financial and other data from 1997.

### Analysis Techniques

The data were examined on both a bivariate and multivariate basis. For the bivariate analyses, the relationships between depreciation choice and the two international trade indicator variables (exporter, importer) were examined on contingency tables since the variables were dichotomous in nature. For the multivariate analysis, logistic regression was employed because the dependent variable (depreciation choice) is a dichotomous variable.

## RESULTS

The contingency tables examining the relationships between exporter and importer status and depreciation policy choice are presented in Tables 1 and 2. Table 1 displays the results of exporter status. Examining the table and the $\chi^2$, the results indicate that exporter status does not appear to influence depreciation policy choice. In Table 2, the results of examining the firm's importer status are displayed. For importers, the most common choice of depreciation methods was straight line. Non-importers, however, were less likely to choose straight-line (only 83 of 199 firms chose straight line) than the alternatives (i.e., a combination of methods or solely accelerated). These results exhibit the pattern expected in hypothesis 2 and the $\chi^2$ indicates that this difference is significant at 0.018.

Table 3 presents the results of multivariate testing of hypotheses 1 and 2, while controlling for other factors which may influence accounting choices. The overall model is significant at 0.009. The model correctly classifies the depreciation choice of 62.6% of the firms in the sample. This is considerably better than the 53.6% classification accuracy of a naive model, which would predict that each firm in the sample, would use the most common choice (i.e., accelerated/combination).[6]

**Table 3.** Logistic Regression Results. Dependent Variable: Depreciation Policy Choice

| *Variable* | *Parameter estimate* | $\chi^2$ | *Probability* > $\chi^2$ |
|---|---|---|---|
| Intercept | −2.5639 | 6.375 | 0.0116 |
| International trade variables | | | |
| Exporting firm | −0.4579 | 2.363 | 0.1242 |
| Importing firm | 0.6137 | 4.733 | 0.0296 |
| Control variables | | | |
| Log of assets | 0.1631 | 4.478 | 0.0343 |
| Debt/assets ratio | 0.3769 | 0.379 | 0.5384 |
| Manufacturer | 0.6776 | 5.008 | 0.0252 |
| $\chi^2$ Test | 15.428 | | |
| Probability > $\chi^2$ | 0.009 | | |
| Association of predicted probabilities and observed responses | | | |
| Correctly classified | 62.6% | | |
| Incorrectly classified | 36.9% | | |
| Tied | 0.5% | | |

For both the export and import variables, the hypotheses predict a positive sign, which would indicate that firms engaging in international trade as either exporter or importers are more likely to choose income increasing accounting policies than those firms which do not engage in international trade. The exporter variable has a sign opposite to that predicted, although the relationship is not statistically significant. This finding does not provide support for hypothesis 1, and indicates that there is no significant relationship between exporter status and depreciation method choice. For the importing firm variable, the expected sign is present, and the variable is statistically significant at conventional levels. As such, the logistic regression results confirm the univariate finding that importers are more likely to use the straight-line depreciation method than are non-importers.

Results for the control variables are mixed. The size variable is significant, although of the opposite sign to that found in most US studies. Other Canadian policy choice studies have found similar conflicting results when examining the size affect on accounting choices (e.g., Booth and Rotenberg, 1991; Cullinan, 1994).[7] The leverage measure was not significantly related to accounting policy choice, although this non-significance is also similar to other Canadian studies (e.g., Rotenberg, 1989; Cullinan, 1994). The manufacturer variable was also significant, although no particular direction was expected for that variable. Note that these variables were included in the model to control for previously observed empirical relationships only, and not to test any hypotheses.

## DISCUSSION AND LIMITATIONS

### Discussion

Overall, the results of the current research imply that importing firms are more likely to choose an income increasing accounting method than are non-importing firms. There

**Table 4.** Effects of Currency Exchange Rate Changes on Financial Prospects of Exporters and Importers

| | *Decrease in value of domestic currency (e.g., Canadian dollar) relative to trade partner's currency (e.g., US dollar)* | *Increase in value of domestic currency (e.g., Canadian dollar) relative to trade partner's currency (e.g., US dollar)* |
|---|---|---|
| Exporting firm | As value of the Canadian dollar falls, sales made in US dollars are worth *more* to Canadian exporter, strengthening the financial position of the Canadian exporter. | As value of the Canadian dollar rises, sales made in US dollars are worth *less* to Canadian exporter, weakening the financial position of the Canadian exporter. |
| Importing firm | As value of the Canadian dollar falls, purchases made in US dollars costs more to Canadian importer, weakening the financial position of the Canadian exporter. | As value of the Canadian dollar rises, purchases made in US dollars costs less to Canadian importer, strengthening the financial position of the Canadian exporter. |

*Note*: The Canadian-US dollar relationship is used in the table as an example and does not exclude other potential foreign exchanges.

appears to be no relationship, however, between exporting firms and accounting choices. Part of the explanation for these differing results may relate to the effects of foreign currency transactions on the financial statements of firms engaged in international trade. The potential effects of currency exchange rate changes on importers and exporters are presented in Table 4.

The first row of Table 4 indicates the effects on exporters of exchange rate changes. When the value of the domestic currency (i.e., the Canadian dollar) is falling, this decline in value results in favorable financial effects for exporters, as they can buy more Canadian dollars from their foreign sales, or can afford to lower their prices in the foreign currency to increase or maintain market share. In either case, the financial condition of a Canadian exporter will benefit from a decrease in value of the Canadian dollar. Alternatively, if the Canadian dollar is rising in value (relative to the buyer's currency), the exporter will be able to buy fewer Canadian dollars with the proceeds from a sale made in a foreign currency, or may have to raise their prices in the foreign currency, which could adversely affect market share. As such, in periods of an increase in the value of the Canadian dollar, the financial condition of the Canadian exporters would be adversely affected.

The second row of Table 4 presents the effects of foreign currency exchange rate changes on the financial condition of importers. In the event of a decline in the Canadian dollar's value, the importer would have to pay more Canadian dollars for purchases from a foreign supplier denominated in the foreign currency. As such, the financial condition of the importing firm would deteriorate, as their expenses would increase. Conversely, in periods of rising value for the domestic currency, importers

would be able to obtain foreign goods for lower costs (in Canadian dollar terms), enhancing their financial condition.

In the 1990s, the value of the Canadian dollar has been decreasing relative to the US dollar, declining from 86.58¢ (US) in January 1991 to 70.11¢ (US) at the end of 1997 (Standard and Poors, 1998). Because 70% to 80% of Canadian trade is with the US (Booth and Rotenberg, 1991; Geddes, 1998), the decreasing value of the Canadian dollar may have affected manager's accounting choice incentives. Such a currency decline would increase incentives for import firms to choose income-increasing policies, while the decline may reduce the incentives for exporters to choose income increasing accounting methods.

There are two potential ways in which a currency value decline may affect a firm's perceived and/or real financial strength. As the value of the Canadian dollars declines, the perceived financial strength of Canadian firms may decrease based on the translation of Canadian financial statements into a foreign currency at lower exchange rates (this will be called *the translation effect*). As presented in Table 4, a declining currency value can favorably affect the financial condition of exporters (*the export effect*). The positive export effect could offset all or part of the negative translation effect, reducing incentives to choose income increasing accounting policies. In contrast, as Table 4 indicates, a declining currency tends to worsen the financial condition of importers (*the import effect*). Thus, for importers, the import effect tends to exacerbate the negative effects of the translation effect, resulting in increased incentives to choose income increasing accounting policies. While this discussion is somewhat speculative, the conclusion is consistent with the findings of this study, which indicate an association between depreciation method choice and importer status, but do not find a relationship between depreciation choice and exporter status.

### Limitations

This study is subject to a number of limitations. These limitations relate to data availability and generalizability. Ideally, a more appropriate measure of the incentives to engage in strategic accounting decision making based on international trade considerations would have been the percentage of the firm's revenues and/or costs associated with foreign transactions. Since such data was unavailable,[8] the model presented here is unable to capture the differing levels of incentives which may exist *among* importers and exporters, rather than *between* those engaging and those not engaging in international trade. In addition, interpretation of the results of this study is limited to large, publicly traded Canadian firms. The extent to which such results may be generalizable to other populations is unknown.

## SUMMARY AND CONCLUSIONS

This paper examined whether a relationship exists between international trading activity and the depreciation policy choices of Canadian firms. A comparison was made of

companies engaged in international trade, and companies that did not have international trading activity. Results suggest that, after controlling for other factors shown to influence accounting polices, importers are more likely to choose income increasing depreciation methods than non-importers. No relationship was found between exporting activity and depreciation policy choice. These divergent findings may relate to the decline in value of the Canadian dollar, which would tend to have a more negative effect on importers than on exporters.

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## NOTES

1. Gupta (1995) examined a unique US corporate structure designed to encourage export (called the Domestic International Trade Corporation or DISC). The effects of the DISC structure on accounting choices were predicated on traditional agency theory and tax rationales, and did not relate to the international trade aspects of these organizations.
2. Using an alternative measure of size, log of sales, did not materially affect the results presented in this paper.
3. Most Canadian firms using LIFO for a portion of their inventory do so only for their US subsidiaries.
4. The inclusion or exclusion of these two observations did not materially affect results presented in this paper.
5. A variable representing the combination of the exporter and importer variable was also examined. Results were largely in accord with the findings based on the exporter variable.
6. Table 1 indicates that 156 firms out of 291 use an accelerated depreciation method or a combination of methods. The accelerated/combination category thus is the modal response and represents 53.6% (i.e., 156/291) of the sample.
7. Cullinan (1994) suggests that the lack of consistency in Canadian testing of the size variable may be due to differences in the institutional and cultural environments between the US and Canada.
8. While the CD Canada database has a field for these percentages, this field was blank for the overwhelming majority of firms in the database.

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# Capsule Commentary

**An International Accounting Comparison: Focus on Asia Pacific,** *compiled by Stephen Taylor and Norma Hall, Deloitte Touche Tohmatsu, Hong Kong, 1999, second edition, iii + 510 pp., US$40/HK$310 (including postage).*

This is the second edition of a useful compendium of comparisons of generally accepted accounting practice in 16 countries or jurisdictions in Asia and the Pacific rim plus the United Kingdom and South Africa. The Asian and Pacific rim regimes are Australia, Canada, the People's Republic of China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, New Zealand, Pakistan, the Philippines, Singapore, Taiwan, Thailand and the United States. Curiously, none of the Latin American countries fronting on the Pacific are included.

The first part of this two-volume compilation consists of two- to four-page thumbnail sketches of the IASC and the 18 standard-setting regimes, and is followed by a comparison of practices and standards among all of the regimes organized around the standards of the International Accounting Standards Committee. The following IASs are treated: 1–2, 7–12, 14, 16–25, 27–28 and 31–34. Only those IASs effective for December 1998 year ends were included, and certain IASs were omitted owing to restricted applicability.

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S.A.Z.

**The International Journal of Accounting, Vol. 34, No. 4, p. 611** **ISSN: 0020-7063.**

# Book Reviews

**Financial Accounting: A Global Approach,** *by Sidney J. Gray and Belverd E. Needles, Jr., Houghton Mifflin, Boston, 1999, xx +599 pp.*

This book is designed for an introductory financial accounting course for students with no previous study in business or accounting. The fundamental concepts covered in an introductory textbook lend themselves particularly well to a global perspective. The authors have successfully written the book from a neutral country perspective. For example, monetary symbols are not used in the text, except in specific examples, so that students will consider their own currency when reading. While international accounting standards are used as the general framework for the text, the authors do a nice job of laying out fundamental concepts and issues (e.g., valuation) and then discussing the different approaches recognized and used across the world.

The authors have done an excellent job of incorporating real company information (e.g., financial statements, related articles) throughout the chapters and exercises. The national diversity of real examples and details is integral to the book's "global perspective." Each chapter also begins with a "Decision Point," which is comprised of actual-company situations requiring a decision by users of financial information. After raising the issue in a Decision Point, the authors demonstrate how the decision can be made by using accounting information. Appendix A of the book contains the actual report of Nestlé, a Swiss multinational company. Aspects of the Nestlé report are referred to throughout the book, and a Nestlé case is included at the end of each chapter.

One important teaching tool the authors utilize in the book is the acknowledgment of areas that tend to cause students trouble. This approach is particularly valuable in an introductory text, as the authors recognize areas that typically cause confusion and then provide students strategies to overcome the confusion.

The book utilizes a traditional approach to teaching accounting (i.e., debits and credits, chart of accounts, general ledger) in the context of a trading (vs. service) company. The basic approach and fundamental concepts are similar to introductory texts written for the US market — only without the US context and standards. The book is divided into three parts: Accounting as an Information System, The Measurement of Financial Position and Performance: Key Reporting Issues, and Special Topics in Financial Accounting and Analysis.

Part 1 consists of five chapters. The tone of the first chapters of an introductory accounting text is particularly critical, as the authors want to capture the interest and imagination of the student. Chapter 1, "Accounting Information, Decision Making, and the Uses of Financial Statements," does a nice job of laying a general foundation of

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business as well as the demand for accounting information. The authors start with an appropriately broad perspective of an enterprise, the measurement issues and the potential users of accounting information and then move into topics such as forms of business entities, financial position and the accounting equation. However, the authors may have been a bit too ambitious with the remainder of the introductory chapter, as they cover, in some detail, topics such as financial statements, accounting standards, independent auditors, and professional ethics, and they also include several detailed examples of accounting for various transactions. Highlights of later chapters in Part 1 include the coverage of internal control, the responsibilities of management, accountants and auditors, and the components of financial statements.

Part 2 considers the major types of assets, liabilities, and shareholders' equity accounts. While the authors do a nice job of initially laying out some fundamental differences in accounting across countries in Part 1, they missed opportunities to specifically address major differences in Part 2. For example, in the chapter on long-term assets, the book focuses on historical cost but only briefly notes in a margin comment the allowable alternative used in some countries to regularly revalue fixed assets so that their reported balance sheet amounts are an approximation of fair value. Likewise, in the chapter on shareholders' equity, there is no discussion of equity reserves (e.g., goodwill reserve, asset revaluation reserve) which are commonly used in some countries.

Part 3 covers the cash flow statement: intercompany investments, consolidated financial statements, foreign currency accounting, and the analysis of financial statements.

The end-of-chapter materials are extensive and excellent. These materials are carefully designed to provide variety and flexibility and are sure to enhance the learning experience of students. Highlights of end-of-chapter materials include a summary and review of learning objectives, a glossary, a review problem (a solution is provided), short-answer problems, objective exercises, and a problem set, as well as conceptual, cultural and ethics mini-cases, decision-making cases, a basic research activity for students to carry out, and interpretation cases from actual businesses. Many of the end-of-chapter exercises lend themselves well to interactive in-class exercises, writing assignments, and critical thinking.

Appendix B of the book contains a comprehensive glossary of international accounting terms. As noted earlier, the book uses International Accounting Standards as the basic framework. The book includes IAS and exposure drafts through October 1997.

Appendix C contains a relatively thorough discussion of the role and activities of the International Accounting Standards Committee (IASC). The appendix does not address some of the tensions between other national or international bodies and the IASC. In particular, the G4, which is composed of the national accounting standard setters of the US, the UK, Canada, Australia and New Zealand, may well develop into a worldwide standard-setting body. As another example, while the US's Financial Accounting Standards Board supports the development of one set of standards for companies to use in cross-border filings, it has been critical of a number of the IASC's accounting standards. The FASB has suggested that the IASC make several improvements to its proposed structure that would make it a better arbiter of worldwide accounting norms. Interestingly, the IASC is likely to be less influenced by the business community than is the FASB, as the IASC structure is dominated by practicing accountants.

The book does not utilize the Internet through margin links or technology problems. In the front of the book, the authors do provide the Internet address for "The Needles

Accounting Resource Center," which provides teacher and student resources. However, at the time of this review (June 1999), the author's book was not yet included in the Web site.

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**Financial Statement Analysis in Europe,** *by J.M. Samuels, R.E. Brayshaw and J.M. Craner, Chapman & Hall, London, 1995, xiii +454 pp.*

This book aims to be a comparative financial statement analysis of accounting issues and practices in a number of different member states of the European Union. The book's objective is to illustrate the difficulties that arise both in intra- and inter-country financial statement analysis. The appropriateness of the book's claim will be judged at the end of the review, after having discussed its structure and content in more detail.

The book is comprised of 17 chapters which are grouped into three parts. The introductory Part I contains four chapters which discuss the general techniques and the limitations of financial ratio analysis, the use of reported accounting information by the stock market, and European accounting diversity as a further factor intensifying the general difficulties when comparing financial statements. The chapter dealing with European accounting diversity lacks substance, as it only touches on attempts to classify accounting systems and to measure accounting diversity. Here, the book shows the need for a second edition, as harmonization at the EU level is still regarded as more significant in comparison with the IASC's standardization process: " ... the IASC is a source of possible reduction of accounting differences but within a European perspective plays a significantly lesser role than the EU" (p. 84).

The book's principal part is Part II, which comprises 10 chapters dealing with a number of different financial reporting issues, each featuring a comparative European analysis of regulation and examples. The chapters are consistently structured, stating the objectives at the beginning, discussing a number of problem areas, comparing the relevant rules in different countries, illustrating these with extracts from annual reports, and presenting references and questions at the end. The focus on financial reporting issues, rather than on countries, is adequate and makes the book useful also as a textbook on comparative international accounting.

Chapter 5 is concerned with the subject of corporate governance. It analyzes the systems of corporate governance that differ the greatest in Europe, that is, in Germany and the U.K. The many aspects of corporate governance examined make it a comprehensive chapter. However, from a European perspective this two-country comparative analysis is unrepresentative.

Chapter 6 deals with tangible fixed assets, focusing on recognition, cost measurement, revaluation and depreciation policy. With respect to the regulatory analysis, the comparative aspect is biased, as the chapter concentrates on the legal requirements and standards in the U.K. Other European countries are not dealt with in the same detail. Differences between countries are illustrated only through extracts from company reports.

In Chapter 7, group accounts, the diversity of consolidation criteria, and methods for accounting for business combinations within Europe are discussed and illustrated. Important differences such as merger and acquisition accounting are examined in the light of their potential impact on financial statement analysis. Chapter 8, dealing with intangible assets, treats the many aspects involved: accounting for goodwill, valuation of brands, research and development costs, and organization costs. Interesting country comparisons are made and illustrated.

Chapter 9 covers accounting for liabilities and provisions. The chapter provides insight into the many gray areas in these accounting issues, in particular between provisions and reserves on the one hand and between short-term borrowing and long-term borrowing on the other. The resulting limitations for ratio analysis are discussed. Differences between countries, such as the practice of accumulating secret "reserves" in German company accounts, are described. While some jurisdictions require the creation of legal reserves or share premium reserves, others require, in addition, revaluation reserves. The chapter contrasts the different European accounting provisions for pensions, for deferred charges, and for contingent liabilities, and points out their effect on gearing ratios.

Chapters 12 through 14 focus on a number of important financial accounting issues: capital instruments, revenue measurement, extraordinary items, inventories, long-term contracts, foreign currency translation and the different meanings of "true and fair view" in Europe.

Part III examines the accounts of two companies, the Italian Pirelli and the French Rhône-Poulenc from the perspective of analysts in six different countries. The adjustments to the company accounts to conform with each country's accounting practices were carried out by national accounting academics. The authors adopt a realistic perspective by pointing out the difficulties faced when reconciling financial statements and attempting to make meaningful comparisons, due to the generally inadequate published information in annual accounts. Some adjustments are more reliable than others. The apparent shortcomings of the authors' reconciliation analysis are, first, that the years under scrutiny, 1990 and 1991, were rather outdated, given the dynamics of international accounting, and, second, that the country comparisons of restated amounts as between the two years lack consistency. That is, while the reconciliation of the 1990 accounts is framed against the relevant accounting regulations in France, Italy, Spain, Germany and the U.K., the 1991 accounts are adjusted to accounting rules in the U.K. and the Netherlands. The rationale for these inconsistent country perspectives from 1990 to 1991 is not explained. Finally, the last chapter aims to summarize the effects of the adjusted financial information on financial ratios. For the 1990 accounts of Pirelli and Rhône-Poulenc, the authors portray the volatility of the results with respect to selected financial ratios calculated from the adjusted accounts in accordance with accounting principles in the U.K., Germany, France, Italy and Spain. Unfortunately, the Netherlands is excluded from the comparison. The volatility of the calculated ratios as a result of the national adjustments emphasizes that the size and nature of certain adjustments can result in very unreliable results in an analysis of financial ratios. Ultimately, reliability of the data obtained will depend on the level of disclosure in the published annual reports.

A number of the textbook's features can be considered as user friendly. Each chapter states its objectives and suggests problems for analysis. Sufficient detail of accounting practice is provided in case studies and extracts from annual accounts. The authors' chosen

structure and the focus on financial accounting issues in Part II make the book adequate for courses in both comparative financial statement analysis and comparative international accounting.

With respect to a number of aspects, however, the book should be revised in a second edition. First, in many chapters the information is outdated. Given the dynamics of international accounting standardization in recent years, a pure European perspective seems no longer appropriate. In this respect also, the selected annual report documents from 1990 to 1993 seem rather old. The increasing impact of IASs and U.S. GAAP has modified the annual accounts of European companies in recent years, and this fact is not appropriately reflected in the book.

Second, the country comparative analysis is unbalanced and is not consistently applied throughout the book. It would have been useful to compare the same countries in each chapter, with the same amount of detail. Instead, the weight of the analysis in Part II is on the U.K. and to a certain extent on Germany, while little comparative information is provided on the accounting rules in Spain, Italy, the Netherlands and France. This makes it more difficult for the reader to follow the adjustments of the financial statements in Part III, where all six countries are compared.

Third, from a language point of view the book sometimes lacks clarity in distinguishing between regulation on the one hand and accounting practice on the other. Moreover, no distinction is made between individual accounts and group accounts. Finally, while some classic references are supplied, the list of references in most chapters is insufficient for a reader who wants to know more about the subject.

Reviewed by Gabi Ebbers
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**International Accounting,** *by Frederick D. S. Choi, Carol Ann Frost and Gary K. Meek, Prentice-Hall, Upper Saddle River, NJ, 1999, 3rd edition, xvi + 478 pp.*

This book, like its 1992 predecessor, targets the "Upper-division undergraduate students and masters students..., along with accountants, financial managers, and lawyers interested in an international accounting reference" (current edition, p. xv; similar to Choi and Mueller, 1992, p. xiii). While no text can fully satisfy such diverse audiences, this book provides the addresses of relevant Web sites and other sources to guide readers who seek further information. It is stated that "Each chapter has been completely rewritten in a straightforward style and infused with illustrations and numeric examples ... " (p. xv). The discussion on topics such as auditing and standards setting, however, has been materially reduced.

Each chapter begins with a short description of its contents and, normally, a discussion of its topic's relevancy. It would have enhanced the usefulness of the reference lists at the end of each chapter if a short annotation for each article had been added to describe its content. Many questions, exercises and cases enhance learning by adding valuable knowledge and requirements for independent search for data. While the writing style in the 1992 and the latest editions are of equal quality, the books' contents are sufficiently different to warrant a review of the latter.

Like its predecessor, the current edition is composed of 12 chapters. The first chapter provides statistics about the magnitude of, and growth in, some segments of the international financial markets. Next, it presents the complete 1997 financial statements of a Japanese firm that is traded *solely* on the Tokyo Stock Exchange, in order "to illustrate the questions that any reader of non-domestic financial statements needs to be able to answer" (p. 4). No guidance is offered, however, as to where to look for answers. A discussion of factors that shape international accounting, together with a preview of the remaining chapters' content, conclude the chapter. The current chapter is shorter and less informative than its 1992 counterpart.

Chapters 2 to 5 compare accounting practices in selected countries and discuss factors that have shaped such practices. Chapters 6 to 8 and 11 focus on some specific issues relating to transnational transactions. The topic of Chapter 9 is financial statement analysis, and Chapters 10 and 12 treat managerial issues pertaining to multinational firms.

Chapter 2 focuses on eight attributes or factors that are said to be country-specific.[1] It is suggested that "If we can identify what causes accounting to develop, we might be able to influence or anticipate its direction and rate of change" (p. 28). Some country classification studies are described to support this claim, and Chapters 3 to 5 discuss the country-specific attributes of some developed and developing countries. While these discussions contribute to our understanding of role of these factors in explaining accounting in developed and developing countries, a more balanced discussion would have been of greater benefit to the readers. The following demonstrate this point.

None of the studies in Chapter 2 is longitudinal in nature — an attribute necessary to infer accounting *development*, the focus of this chapter. Unfortunately, longitudinal studies are in short supply in the literature. That the authors attempted to compare the classification pattern in a 1990 study with that of a 1980 study is, therefore, commendable. However, of the 64 countries examined between the two studies, only 26 are members of both samples. This limits the value of the comparison. Some studies are based on Hofstede's popular work, which has been subject to much criticism.[2] No attention is called to these shortcomings.

Citing a 1971 article, the authors claim that, in contrast to code law countries, in common law countries accounting rules are " ... established by professional organizations working in the private sector" (p. 30). Notable exceptions, such as Australia, New Zealand and Israel, all common law countries, are not mentioned. Other exceptions include the Netherlands, a code law country, which is classified together with the UK and the US (p. 51).

It is suggested that, in countries with "credit-based systems where banks are the dominant source of finance," disclosures are more limited and conservative accounting measures are more common than in "countries with strong capital markets." (p. 30). Financial modes, however, are changing over time. In 1987, 15% and 30% of US firms' capital needs were financed by shareholder equity and bank loans, respectively. The corresponding proportions in 1997 were 9% and 51%.[3] Yet there is no indication that corporate accounting in the US shifted to more conservative measures and less extensive disclosure.

The authors provide a short, informative and well-organized review of the accounting profession, the structure of standards-setting bodies, major accounting rules and practices, and some aspects of auditing for each of the six selected countries in Chapter 3. Of these

countries, three fall in the "uniform approach" cluster in Nobes (1983) and four are in "US influence" cluster in Frank (1979).[4] The use of a more diversified sample, explaining differences in accounting practices within each group of countries, and adding a description of ethical provisions, professional entry requirements, and enforcement effectiveness could have enhanced the information set even further.

Using inconsistent selection criteria, the authors chose China, Taiwan, the Czech Republic and Mexico for Chapter 4 on emerging economies. Yet these countries are too different to facilitate a meaningful comparison. Unfortunately, this opportunity was not fully exercised. With the exception of China, the review of each country's attributes is extremely limited. The comparative summary of accounting requirements in Exhibit 4.5 (p. 116) focuses on broad legal stipulations and adds little to the preceding discussion.

The first part of Chapter 5 draws heavily on Frost and Gu (1998) and Frost and Ramin (1997). With the unexplained exception of the Netherlands, it utilizes the same developed countries as in Chapter 3. It offers an excellent review of accounting requirements and practices in these countries and discusses motivations for voluntary and mandatory disclosure. It is unclear, however, whether the sample firms are representative of their respective populations. Citing Frost and Gu, it is suggested "that US firms that listed on European stock exchanges generally did *not* achieve significant benefits ... " (p. 127). This is consistent with findings by Fuerst (1997, 1998) but is inconsistent with evidence reported by Baker et al. (1998) and Defeo and Falk (1999). It might be advisable to consider a broader information base for future editions.

The second part of Chapter 5 draws on Saudagaran and Diga (1997) and concludes that "disclosure levels and quality are lower in emerging market countries than in developed countries" (p. 149). The authors assert that "enforcement capability in developed markets is enhanced by the presence of relatively more accountants and auditors, and potential enforcement difficulties in the emerging markets are more likely than in developed markets" (p. 150). No support for these assertions is offered.

Chapters 6 and 11 skillfully navigate the reader through complex transactions in foreign and fluctuating currencies. Whereas Chapter 6 is mostly US-specific, it may serve as an introduction to Chapter 11, which focuses on risk management and the financial instruments available for hedging. Readers who are already familiar with Statement of Financial Accounting Standards No. 52 (Financial Accounting Standards Board, 1981), might derive little utility from Chapter 6. Teaching Chapter 11 immediately after Chapter 6 may reduce unnecessary repetition from overlapping material.

Much of Chapter 7 is dedicated to the US and UK accounting standards on inflation and price instability that are no longer in effect. The International Accounting Standards and inflation accounting in Brazil are also discussed. The theoretical discussion and commentary enhance our understanding of the subject matter. The authors assert that "the purpose of inflation accounting is to ... enable anyone interested to assess the amounts, timing, and uncertainty of future cash flows" (p. 226). How the various translation and disclosure methods, including those preferred by the authors, facilitate such assessment is not demonstrated.

Chapter 8, discusses harmonization in three areas: (1) accounting standards, (2) disclosures in connection with securities offerings and stock exchange listings; and (3) auditing standards (p. 249). While the reader gets a taste of (1) and (2), the chapter is almost silent about (3). The authors next discuss the major international organizations and

their contributions to accounting harmonization. It would have enhanced the usefulness of this discussion if short descriptions would have been added to describe the contents of the IASC's standards, listed in Exhibits 8.3 and 8.5 (pp. 260 and 263). Excellent examples of such a format appear on pages 268, 271, 274 and 275 in conjunction with the EU Directives and proposed IOSCO standards.

The claim that Chapter 9 "synthesizes information presented in Chapters 2 through 8 by examining several challenges encountered in analyzing foreign financial statements" (p. 290) is well supported. The chapter discusses a blend of important issues and offers practical solutions to complicated problems.

Financial/managerial planning and control in multinational settings is the topic of Chapter 10. Following an overview of conceptual issues, the chapter discusses implementation and evaluation tools and methods. In spite of the large range of issues and the complexity, the authors managed to discuss this topic in a single chapter without loss of clarity.

Chapter 12, which concerns International Taxation and Transfer Pricing, is limited to "major variables that financial managers need to be aware of in tax planning for multinational operations" (p. 428). Conceptual issues and practical applications are illuminated. Exhibit 12.3 on withholding tax rates (pp. 438–39) could have been omitted without loss of content. It would have been beneficial for the authors to have expanded the discussion of the role of transfer pricing in performance evaluation and profit sharing.

In conclusion, the book utilizes a unique combination of the so-called country and issue approaches and offers an excellent blend of theoretical, conceptual and practical discussions in the various areas of international accounting. It is highly recommended for upper division undergraduate and master's courses. Instructors might supplement the text with additional information. The authors' guidance on where to look for such information is very helpful in this respect.

Reviewed by Haim Falk
Visiting from Rutgers University
The Technion
Haifa, Israel

## NOTES

1. These attributes are: (1) type of legal system, i.e., code vs. common law, (2) major source of finance, i.e., capital markets vs. bank loans, (3) taxation, (4) political and economic ties, (5) inflation rate, (6) level of economic development, (7) education level, and (8) culture.
2. An attempt in the 1990s to replicate Hofstede's findings by utilizing a different sample failed (Chanchani 1998 and Willett and Chanchani, 1999).
3. See "Commercial Banking: Long Live the Loan," *The Economist*, (June 12, 1999), p. 79.
4. Indeed, Exhibit 3.3 (pp. 78, 79) reveals many similarities among France, Germany and Japan, and among the Netherlands, the UK and the US.

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**Comparative International Accounting,** *by Christopher Nobes and Robert Parker, Prentice Hall Europe, London, 1998, fifth edition, xvi + 541 pp.*

The international economy has witnessed a number of significant developments during the last few years. Factors such as the steady trend towards globalization, the increasing role of multinational enterprises (MNEs), and the emergence of transitional economies (e.g., China, Eastern Europe) instill considerable turbulence in today's economy. This turbulence, in turn, has a considerable effect on the accounting domain by increasing the pace at which accounting standards are promulgated and prompting companies to design and implement innovative accounting practices. In such a circumstance, textbooks on international accounting require continuous effort to update and revise past editions. Nobes and Parker's textbook constitutes one example of serious adaptation of teaching materials to the equable dynamism of international business.

This edition differs importantly from the previous one. To tackle some of the developments in international business noted above, four new chapters have been added. Chapter 2 addresses the causes of international differences, Chapter 12 examines accounting developments in nine countries or regions (e.g., Australia, Canada, Denmark, Italy, Norway, Sweden, Singapore, South Korea, and Spain) beyond the six major countries accorded a full chapter each. In addition, Chapter 13 analyzes accounting practices in Central and Eastern Europe and China. Lastly, Chapter 21 deals with some

international aspects of management accounting. Furthermore, the fifth edition of the textbook contains other significant changes: UK (Chapter 6) and US (Chapter 7) are now covered in individual chapters, and discussion questions are included at the end of the chapters. These modifications embody a coherent and well-articulated response to some of the changes presently experienced in the field of international accounting. Moreover, this edition provides students with a more pedagogically convincing text.

As in the four previous editions, the textbook is co-edited by Christopher Nobes and Robert Parker. Each of the editors is also the author or co-author of 14 of the 21 chapters comprising the book, while the remaining seven chapters constitute ad hoc contributions by 10 international scholars. Most of these scholars combine a local knowledge of the issue under consideration, thus possessing some complementary international perspective as a result of their teaching, research or membership in regulatory bodies. This combination of local and wider expertise is instrumental in making the book a particularly interesting work.

The book is organized into four parts. Part I consists of five chapters dealing with introductory and comparative issues in international financial reporting. Treatments of the major international differences, their causes, and the clustering of countries into groups is followed by an overview of the convergence towards a set of common accounting standards. Part II constitutes the core of the book and is composed of eight chapters that address country issues. As noted above, whereas some chapters examine a single country (UK, US, the Netherlands, France, Germany and Japan), certain other countries are collectively examined in a single chapter (e.g., the nine countries addressed in Chapter 12).

The depth of treatment of each country depends very much on whether it is the subject of study in a full chapter. Chapter 9, for example, addresses the financial reporting in France. It provides a comprehensive overview of financial reporting by outlining the prominent role of the Plan Comptable Général (PCG) in French financial reporting as well as by embedding the standards in their institutional context. The chapter also contains three appendices that depict the contents of the PCG, the chart of accounts and the standard format for financial statements. In contrast to the comprehensive overview that characterizes countries studied in individual chapters, those jointly analyzed in one chapter are subject to a more superficial examination (see Chapters 12 and 13). Chapter 12 illustrates this situation. It addresses financial reporting issues in nine “important” countries, ranging from South Korea to Sweden. The examination of financial reporting regulation and practice in those countries lacks depth and might confuse potential users of the book.

Part III consists of four chapters and studies some of the main issues in international accounting: consolidation, foreign currency, segment reporting, and inflation accounting. Lastly, Part IV also consists of four chapters and examines issues ranging from international financial analysis to management accounting. At first glance, this structure of the text may convey the notion that it does not deal as much with comparative issues as it does with country issues. However, the organization of the text actually corresponds with a division of materials between comparative and country issues. While the former is found in Parts I, III, and IV, the latter corresponds with Part II. The outcome is very helpful for students, as they can derive from the analysis of chapters forming Part II the comparative underpinnings addressed in the other parts of the text.

Although the editors have succeeded in their job of updating and revising previous editions of the text, I would like to call their attention to a number of issues that might deserve an ongoing attention. First, issues covered in the Part IV of the text assume a previous, considerable knowledge by students. Although this is consistent with a text targeted for graduate students and, with the ever-present page restriction from publishers, I feel that the concentration of some materials into a single chapter is sometimes not too informative (e.g., see Chapter 21 on managerial accounting). Second, the assistance provided to instructors may well be updated to the developments of new technologies, for example, by providing online ancillary materials to instructors through a password supplied by the publisher. In addition to materials presently available in the teacher's manual, others materials, such as cases, solutions to cases, and a complete set of ready-to-use overhead slides, may well benefit from such technological developments. Third, the authors might wish to provide more in-depth analysis of financial reporting of the several countries studied in Chapters 12 and 13. Lastly, one misses an examination of financial reporting in Latin American countries. This region has captured considerable foreign investment from European, Asian and North American multinationals and may deserve some attention in a forthcoming edition of the textbook.

The authors, in short, have produced a singular, well-organized and well-written tool in the growing market for international accounting textbooks. This makes the book a suitable instructional tool for business majors entering an MBA program.

Reviewed by Salvador Carmona
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Madrid, Spain

# Author Index for Volume 34

# Subject Index for Volume 34

# INSTRUCTIONS FOR AUTHORS

**AIMS and SCOPE**. The aims of *The International Journal of Accounting* are to advance the academic and professional understanding of accounting theory and practice from the international perspective and viewpoint. The *Journal* recognizes that international accounting is influenced by a variety of forces, e.g., governmental, political and economic.

The *Journal* attempts to assist in the understanding of the present and potential ability of accounting to aid in the recording and interpretation of international economic transactions. These transactions may be within a profit or nonprofit environment. The *Journal* deliberately encourages a broad view of the origins and development of accounting with an emphasis on its functions in an increasingly interdependent global economy, and welcomes manuscripts that help explain current international accounting practices, with related theoretical justifications, and identify criticisms of current practice. Other than occasional commissioned papers or special issues, all the manuscripts published in the *Journal* are selected by the editors after the normal refereeing process.

1. Manuscripts should be submitted in triplicate to the Editor, Professor Young Kwon, *The International Journal of Accounting*, University of Illinois, 320 Commerce West, 1206 S. Sixth Street, Champaign, IL 61820, U.S.A.
2. All manuscripts must be typewritten or word processed, double spaced on one side only and numbered consecutively, including an abstract of approximately 100 words, and 6 key words for indexing. Papers must either be neither previously published nor submitted elsewhere simultaneously. Authors are responsible for obtaining permission from the copyright owner (usually the publisher) to use any quotations, illustrations, or tables from another source.
3. The author's full name, affiliation, and when applicable, e-mail address should appear on the title page.
4. All tables , figures and illustrations should accompany the manuscript on separate sheets. Captions should clearly identify all separate matter, and all figures must be submitted in camera ready copy. All should be called out in text and indication given as to location. For example.

   TABLE 1 ABOUT HERE.

5. Footnotes should be numbered consecutively throughout the manuscript with superscript Arabic numerals. They should be collected in a separate file at the end of the text.
6. References should be cited in the text as follows:

   Schweikart and O'Conner (1989) agree with this method. Other studies have found similar results (Schweikart and O'Conner, 1989; Smith, 1991).

   On a separate Reference page(s), each citing should appear, double-spaced, in alphabetical orders as follows:

   **Journal Articles**

   Langlois, Catherine C. and Bodo B. Schlegelmilch. 1990. "Do Corporate Codes of Conduct Reflect National Character?" *Journal of International Business Studies*, (Fourth Quarter): 519–539.

   **Books**

   Hampden-Turner Charles and Alfons Trompenaars. 1993. *The Seven Cultures of Capitalism*. New York: Doubleday.

7. Upon acceptance the author is to submit one copy of the approved manuscript on a spellchecked IBM compatible, program specific disk to the editor. The accuracy of the disk and proofs is the responsibility of the author. Macintosh submissions are limited to high density disks.

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